

**UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

PERSONALIZED MEDIA
COMMUNICATIONS, LLC

Plaintiff,

v.

APPLE, INC.,

Defendant.

§§§§§
Case No. 2:15-cv-01366-JRG-RSP
(Lead)

PERSONALIZED MEDIA
COMMUNICATIONS, LLC

Plaintiff,

v.

TOP VICTORY ELECTRONICS
(TAIWAN) CO. LTD., ET AL.,

Defendants.

§§§§§
Case No. 2:15-cv-01206-JRG-RSP
(Consolidated)

PERSONALIZED MEDIA
COMMUNICATIONS, LLC

Plaintiff,

v.

SAMSUNG ELECTRONICS AMERICA, INC.
and SAMSUNG ELECTRONICS CO., LTD.

Defendants.

§§§§§
Case No. 2:15-cv-01754-JRG-RSP

MEMORANDUM OPINION AND ORDER

On September 23, 2016, the Court held a hearing to determine the proper construction of the disputed terms in six patents. The Court has considered the parties' claim construction briefing (Dkt. Nos. 69, 78, 196 and 83)¹ and arguments. Based on the intrinsic and extrinsic evidence, the Court construes the disputed terms in this Memorandum Opinion and Order. *See Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005); *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831 (2015).

BACKGROUND AND THE ASSERTED PATENTS

Personalized Media Communications, ("PMC") brought multiple actions alleging patent infringement. One action was brought against Apple, Inc. ("Apple"). Another action was brought against Top Victory Electronics (Taiwan) Co. Ltd., TPV Int'l (USA), Inc., Envision Peripherals, Inc., Top Victory Electronics (Fujian) Co. Ltd., TPV Electronics (Fujian) Co. Ltd., TPV Technology Ltd., Hon Hai Precision Industry (Taiwan) Co., Ltd., Wistron Corp., Wistron Infocomm Technology (Texas) Corp., Wistron Infocomm Technology (America) Corp., and Vizio (collectively, "Vizio"). Those two actions have been consolidated for pre-trial purposes. Further, the claim construction terms in those two actions has been separated into two phases. This Court has already issued an Opinion and Order on the Phase 1 terms ("Phase 1 Order").² Resolution of the Phase 2 terms is provided in this Opinion and Order. Apple is not a participant in the Phase 2 dispute. A third action was brought against Samsung Electronics America, Inc.

¹ The docket numbers referenced herein generally reference the docket numbers in Case No. 2:15-cv-01754-JRG-RSP. However, the Vizio briefing (Dkt. No. 196) is from Case No. 2:15-cv-01366-JRG-RSP (Lead).

² The Phase 1 Order is found in Case No. 2:15-cv-01366-JRG-RSP (Lead).

and Samsung Electronics Co., Ltd. (collectively “Samsung”).³ In addition to the Phase 2 disputes, this order addresses the Samsung action claim construction disputes.

This Opinion and Order includes the construction of terms found in six patents: U.S. Patent Nos. 7,747,217 (“217 Patent”), 7,752,649 (“2,649 Patent”), 7,752,650 (“650 Patent”), 7,856,649 (“6,649 Patent”), 8,675,775 (“775 Patent”), and 8,711,885 (“885 Patent”) (collectively, “the Asserted Patents”). The ’2,649 Patent is also asserted against the Apple. The ’2,649 Patent claim terms that overlap both actions are included in the Phase 1 construction. Some disputed terms addressed herein relate to both the Samsung and Vizio actions, some relate to only the Samsung action and some relate to only the Vizio action.

The Asserted Patents are part of patent family which has extensive prosecution and litigation history, including multiple prior litigations, reexaminations and IPRs. The Asserted Patents were originally filed in May and June 1995 and are part of a chain of continuation applications filed from U.S. Patent 4,965,825 (“the ’825 Patent”). The ’825 Patent issued from an application filed in 1987. The ’825 Patent was a continuation-in-part application of another application first filed in 1981 (now U.S. Patent No. 4,694,490).⁴

The disputed terms fall into 33 term groupings. A discussion of the technology of the Asserted Patents is found in the Phase 1 Order.

LEGAL PRINCIPLES

“It is a ‘bedrock principle’ of patent law that ‘the claims of a patent define the invention to which the patentee is entitled the right to exclude.’” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (quoting *Innova/Pure Water Inc. v. Safari Water Filtration Sys.*,

³ Vizio and Samsung are collectively referred to as “Defendants.”

⁴ For citations to the 1981 specification the parties cite to the ’490 Patent. For citations to the 1987 specification, citation is generally made to the ’217 Patent.

Inc., 381 F.3d 1111, 1115 (Fed. Cir. 2004)). To determine the meaning of the claims, courts start by considering the intrinsic evidence. *Id.* at 1313; *C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 861 (Fed. Cir. 2004); *Bell Atl. Network Servs., Inc. v. Covad Commc'n Group, Inc.*, 262 F.3d 1258, 1267 (Fed. Cir. 2001). The intrinsic evidence includes the claims themselves, the specification, and the prosecution history. *Phillips*, 415 F.3d at 1314; *C.R. Bard, Inc.*, 388 F.3d at 861. The general rule—subject to certain specific exceptions discussed *infra*—is that each claim term is construed according to its ordinary and accustomed meaning as understood by one of ordinary skill in the art at the time of the invention in the context of the patent. *Phillips*, 415 F.3d at 1312–13; *Alloc, Inc. v. Int'l Trade Comm'n*, 342 F.3d 1361, 1368 (Fed. Cir. 2003); *Azure Networks, LLC v. CSR PLC*, 771 F.3d 1336, 1347 (Fed. Cir. 2014) (“There is a heavy presumption that claim terms carry their accustomed meaning in the relevant community at the relevant time.”) (vacated on other grounds).

“The claim construction inquiry . . . begins and ends in all cases with the actual words of the claim.” *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1248 (Fed. Cir. 1998). “[I]n all aspects of claim construction, ‘the name of the game is the claim.’” *Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1298 (Fed. Cir. 2014) (quoting *In re Hiniker Co.*, 150 F.3d 1362, 1369 (Fed. Cir. 1998)). First, a term’s context in the asserted claim can be instructive. *Phillips*, 415 F.3d at 1314. Other asserted or unasserted claims can also aid in determining the claim’s meaning, because claim terms are typically used consistently throughout the patent. *Id.* Differences among the claim terms can also assist in understanding a term’s meaning. *Id.* For example, when a dependent claim adds a limitation to an independent claim, it is presumed that the independent claim does not include the limitation. *Id.* at 1314–15.

“[C]laims ‘must be read in view of the specification, of which they are a part.’” *Id.* (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc)). “[T]he specification ‘is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.’” *Id.* (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)); *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002). But, “[a]lthough the specification may aid the court in interpreting the meaning of disputed claim language, particular embodiments and examples appearing in the specification will not generally be read into the claims.”” *Comark Commc’ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1998) (quoting *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1571 (Fed. Cir. 1988)); *see also Phillips*, 415 F.3d at 1323. “[I]t is improper to read limitations from a preferred embodiment described in the specification—even if it is the only embodiment—into the claims absent a clear indication in the intrinsic record that the patentee intended the claims to be so limited.” *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 913 (Fed. Cir. 2004).

The prosecution history is another tool to supply the proper context for claim construction because, like the specification, the prosecution history provides evidence of how the U.S. Patent and Trademark Office (“PTO”) and the inventor understood the patent. *Phillips*, 415 F.3d at 1317. However, “because the prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes.” *Id.* at 1318; *see also Athletic Alternatives, Inc. v. Prince Mfg.*, 73 F.3d 1573, 1580 (Fed. Cir. 1996) (ambiguous prosecution history may be “unhelpful as an interpretive resource”).

Although extrinsic evidence can also be useful, it is “less significant than the intrinsic record in determining the legally operative meaning of claim language.” *Phillips*, 415 F.3d at 1317 (quoting *C.R. Bard, Inc.*, 388 F.3d at 862). Technical dictionaries and treatises may help a court understand the underlying technology and the manner in which one skilled in the art might use claim terms, but technical dictionaries and treatises may provide definitions that are too broad or may not be indicative of how the term is used in the patent. *Id.* at 1318. Similarly, expert testimony may aid a court in understanding the underlying technology and determining the particular meaning of a term in the pertinent field, but an expert’s conclusory, unsupported assertions as to a term’s definition are entirely unhelpful to a court. *Id.* Generally, extrinsic evidence is “less reliable than the patent and its prosecution history in determining how to read claim terms.” *Id.* The Supreme Court recently explained the role of extrinsic evidence in claim construction:

In some cases, however, the district court will need to look beyond the patent’s intrinsic evidence and to consult extrinsic evidence in order to understand, for example, the background science or the meaning of a term in the relevant art during the relevant time period. See, e.g., *Seymour v. Osborne*, 11 Wall. 516, 546 (1871) (a patent may be “so interspersed with technical terms and terms of art that the testimony of scientific witnesses is indispensable to a correct understanding of its meaning”). In cases where those subsidiary facts are in dispute, courts will need to make subsidiary factual findings about that extrinsic evidence. These are the “evidentiary underpinnings” of claim construction that we discussed in *Markman*, and this subsidiary fact finding must be reviewed for clear error on appeal.

Teva Pharm. USA, Inc. v. Sandoz, Inc., 135 S. Ct. 831, 841 (2015).

A. Departing from the Ordinary Meaning of a Claim Term

There are “only two exceptions to [the] general rule” that claim terms are construed according to their plain and ordinary meaning: “1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of the claim term

either in the specification or during prosecution.”⁵ *Golden Bridge Tech., Inc. v. Apple Inc.*, 758 F.3d 1362, 1365 (Fed. Cir. 2014) (quoting *Thorner v. Sony Computer Entm’t Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012)); *see also GE Lighting Solutions, LLC v. AgiLight, Inc.*, 750 F.3d 1304, 1309 (Fed. Cir. 2014) (“[T]he specification and prosecution history only compel departure from the plain meaning in two instances: lexicography and disavowal.”). The standards for finding lexicography or disavowal are “exacting.” *GE Lighting Solutions*, 750 F.3d at 1309.

To act as his own lexicographer, the patentee must “clearly set forth a definition of the disputed claim term,” and “clearly express an intent to define the term.” *Id.* (quoting *Thorner*, 669 F.3d at 1365); *see also Renishaw*, 158 F.3d at 1249. The patentee’s lexicography must appear “with reasonable clarity, deliberateness, and precision.” *Renishaw*, 158 F.3d at 1249.

To disavow or disclaim the full scope of a claim term, the patentee’s statements in the specification or prosecution history must amount to a “clear and unmistakable” surrender. *Cordis Corp. v. Boston Sci. Corp.*, 561 F.3d 1319, 1329 (Fed. Cir. 2009); *see also Thorner*, 669 F.3d at 1366 (“The patentee may demonstrate intent to deviate from the ordinary and accustomed meaning of a claim term by including in the specification expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope.”). “Where an applicant’s statements are amenable to multiple reasonable interpretations, they cannot be deemed clear and unmistakable.” *3M Innovative Props. Co. v. Tredegar Corp.*, 725 F.3d 1315, 1326 (Fed. Cir. 2013).

⁵ Some cases have characterized other principles of claim construction as “exceptions” to the general rule, such as the statutory requirement that a means-plus-function term is construed to cover the corresponding structure disclosed in the specification. *See, e.g., CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1367 (Fed. Cir. 2002).

B. Definiteness Under 35 U.S.C. § 112, ¶ 2 (pre-AIA) / § 112(b) (AIA)⁶

Patent claims must particularly point out and distinctly claim the subject matter regarded as the invention. 35 U.S.C. § 112, ¶ 2. A claim, when viewed in light of the intrinsic evidence, must “inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2129 (2014). If it does not, the claim fails § 112, ¶ 2 and is therefore invalid as indefinite. *Id.* at 2124. Whether a claim is indefinite is determined from the perspective of one of ordinary skill in the art as of the time the application for the patent was filed. *Id.* at 2130. As it is a challenge to the validity of a patent, the failure of any claim in suit to comply with § 112 must be shown by clear and convincing evidence. *Id.* at 2130 n.10. “[I]ndefiniteness is a question of law and in effect part of claim construction.” *ePlus, Inc. v. Lawson Software, Inc.*, 700 F.3d 509, 517 (Fed. Cir. 2012).

When a term of degree is used in a claim, “the court must determine whether the patent provides some standard for measuring that degree.” *Biosig Instruments, Inc. v. Nautilus, Inc.*, 783 F.3d 1374, 1378 (Fed. Cir. 2015) (quotation marks omitted). Likewise, when a subjective term is used in a claim, “the court must determine whether the patent’s specification supplies some standard for measuring the scope of the [term].” *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1351 (Fed. Cir. 2005); *accord Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1371 (Fed. Cir. 2014) (citing *Datamize*, 417 F.3d at 1351).

AGREED TERMS

The parties agreed to the following constructions in the Joint Claim Construction Chart with regard to terms in dispute amongst PMC, Vizio and Samsung.

⁶ Because the application resulting in the patent was filed before September 16, 2012, the effective date of the AIA, the Court refers to the pre-AIA version of § 112.

Term	Agreed Construction Between PMC and Vizio and Between PMC and Samsung
processor (’2,649 Patent claims 1, 26, 27, 28, 29, 39, 48, 49, 50, 62, 64, 67, 78, 85, 92, 93, 94, and 97; ’650 Patent claims 1, 18, 32; ’6,649 Patent claim 9; ’775 Patent claims 2 and 11; ’885 Patent claims 1, 9 and 23)	a device that performs operations according to instructions
Preambles of ’2,649 Patent claims 78, ’6,649 Patent claim 9, ’885 Patent claims 1, 9, and 105, ’650 Patent claims 1 and 18, ’775 Patent claims 2 and 11	The preamble is limiting. ⁷
inputting logic (’6,649 Patent claim 9)	This term does not require construction beyond its plain and ordinary meaning.
embedded signal[s] (’885 Patent claim 1)	signals that are enclosed within or made an integral part of a transmission
embedded data [on said information transmission] (’885 Patent claim 9)	data that is enclosed within or made an integral part of said information transmission

(Dkt. No. 85 at 1, 22-24; Dkt. No. 91 at 2-3.)

PMC and Vizio agreed to the following constructions in the Joint Claim Construction

Chart with regard to terms in dispute amongst PMC and Vizio only.

Term	Agreed Construction As Between PMC and Vizio
inputting logic into said processor or computer (’6,649 Patent claim 9)	This term does not require construction beyond its plain and ordinary meaning.
generates information based on said second medium based on said identifying content of said second medium (’217 Patent claim 38)	This term does not require construction beyond its plain and ordinary meaning.
broadcast [transmission] (’775 Patent claim 5; ’885 Patent claims 1, 10,	an over-the-air transmission from one location to multiple locations

⁷ The parties’ final joint claim construction chart further provides the parties’ agreed statements as to why each particular preamble is limiting. (Dkt. No. 85 at 22-24.)

105 and 106)	
cablecast [transmission] (’775 Patent claim 5; ’885 Patent claims 1, 11, 105 and 106)	a transmission over hard-wire from one location to multiple locations

(Dkt. No. 212 at 7-9.)

PMC and Samsung agreed to the following constructions in the Joint Claim Construction Chart with regard to terms in dispute amongst PMC and Samsung only.

Term	Agreed Construction As Between PMC and Samsung
programming [noun] (’2,649 Patent claims 1, 39, 48, 49, 63, 67, 78, 92, and 93, ’6,649 Patent claims 9 and 10, ’775 Patent claim 13)	(noun) everything that is transmitted electronically to entertain, instruct, or inform, including television, radio, broadcast, print, and computer programming as well as combined medium programming
digital video signals (’2,649 Patent claim 62, ’650 Patent claim 18)	video signals encoded as discrete numerical values instead of an analog representation

(Dkt. No. 85 at 34, 44.)

Several terms were not presented in the parties' final claim construction charts but were noted in the claim construction briefing to be agreed terms:

Term	Construction
setting a visible background color at some or all of said memory (’650 Patent claim 4)	no construction necessary (Agreed between PMC, Samsung and Vizio) (Dkt. No. 69 at 27-28; Dkt. 78 at 24; Dkt. 196 at 19)
mass medium programming (’885 Patent claims 9 and 14)	everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming, designed for multiple recipients (Agreed between PMC and Vizio) (Dkt. No. 69 at 37; Dkt. No. 196 at 25)
whereby the decoder is capable of decoding	no construction necessary

and transferring, based on the control signal (’775 Patent claim 2)	(Agreed between PMC and Vizio) (Dkt. No. 69 at 42; Dkt. 196 at 29)
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DISPUTED TERMS

1. “processor instruction[s]” (’217 Patent claims 1 and 38, ’775 Patent claim 18)

PMC	Vizio & Samsung Defendants
Commands or program codes that are executed by, or enabling information that instructs, a processor to perform operations.	No construction necessary. If construction is necessary: Commands that are executed by a processor to perform operations.

The central dispute is that, in addition to commands, PMC asserts that the term also encompasses information that instructs a processor to perform an operation (i.e., the processor is preconfigured to respond to some information).

Positions of the Parties

PMC contends that the term also includes a processor that is preconfigured to perform an operation, needing only an “instruction” to begin doing so. PMC points to: “Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to instruction signals embedded in the ‘Wall Street Week’ programming transmission.” ’490 Patent 19:42-44. PMC objects to Defendants’ construction as not encompassing this scenario. PMC contends that Defendants argue that “instruction signals” and “processor instructions” are distinct. PMC contends that the Defendants’ distinction excludes signals that trigger the execution of commands by the processor. (Dkt. No. 83 at 1.) PMC contends that the specification does not make such a fine distinction and points to the statement: “the microcomputer at each subscriber station . . . is preprogrammed . . . to operate in a predetermined fashion or fashions in response to said initial

instructions.” ’217 Patent 13:2-7. PMC contends that only its construction includes instructions that may cause a processor to perform preprogrammed operations. (Dkt. No. 83 at 1.)

Vizio contends that there is no support for “program codes” or “enabling information” as used by PMC. Vizio contends that “enabling information” is not used in the specification and that the citation provided by PMC contradicts PMC’s assertion. More particularly, Vizio contends that the specification at ’490 Patent 19:42-44 teaches that the processor is preprogrammed with “processor instructions” that are executed by the processor in response to “instruction signals.” (Dkt. No. 196 at 1.)

Samsung contends the term is well known in the art. Samsung contends that it is unclear what “program codes” are and, thus, PMC adds uncertainty to the construction. Samsung also objects to PMC’s inclusion of instructions that trigger execution of commands by a processor. Samsung contends that the passages cited by PMC indicate that signals can trigger the execution of instructions at the processor, but do not equate “instruction signals” with “processor instructions.” Samsung contends that PMC relies on a circular notion that an instruction to process instructions is included in “processor instructions.” (Dkt. No. 78 at 1-2.)

As to “program code,” PMC points to: “The term ‘signal unit’ hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a unique purchase order number identifying the proper use of a programming unit, or a general instruction identifying whether a programming unit is to be retransmitted immediately or recorded for delayed transmission.” ’490 Patent 2:64-3:3.

The parties did not argue this term at the oral hearing.

Analysis

The specification describes an example in which instruction signals are provided to a microcomputer to activate preprogrammed functionality: “Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to instruction signals embedded in the ‘Wall Street Week’ programming transmission.” ’490 Patent 19:42-44. Further, though not mentioning “instruction signals,” elsewhere, the specification describes the microcomputer being preprogrammed to evaluate “initial instructions” and operate in accordance with the initial instructions: “the microcomputer at each subscriber station (including microcomputer, 205) is preprogrammed (1) to evaluate particular initial instructions in each distinct series of received input instructions to ascertain how to process the information of said series and (2) to operate in a predetermined fashion or fashions in response to said initial instructions.” ’217 Patent 13:2-7. It is clear from the specification that instructions may therefore merely activate preprogrammed functionality. Defendants never affirmatively state that they contend their construction excludes such embodiments. However, implicitly Defendants appear to take such a position. This construction issue should be resolved. *See O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008). The specification makes clear that the instructions may be signals that activate preprogrammed functionality of the processor. ’490 Patent 19:42-44; ’217 Patent 19:42-44. PMC’s use of “program codes” does not, however, add clarity and only interjects ambiguity. The specification use of “signals” is clear.

The Court construes “processor instruction[s]” to mean “commands or signals that are executed by, or instruct, a processor to perform operations.”

2. Programming Terms

programming [verb] ('6,649 Patent claim 9, '650 Patent claims 1, 18, and 32, '2,649 Patent claims 2, 3, 11, 26, 37, 41 and 42)

PMC	Vizio & Samsung Defendants
[verb] Supplying or loading information or instructions that are used to activate, enable, or perform a processing functionality.	[verb] Providing a sequence of operating instructions.

programmable [control] processor[s] ('885 Patent claim 102)

PMC	Vizio & Samsung Defendants
This term does not require construction beyond its plain and ordinary meaning.	[Control] processors that can be provided with a sequence of operating instructions.

The parties primarily dispute whether programming includes “loading information” to “activate” or “enable” preprogrammed operations or is limited to the use of operating instructions.

Positions of the Parties

PMC contends that the term includes both providing a device with executable instructions and a second scenario in which the term also include “loading information” to “activate” or “enable” preprogrammed operations. (Dkt. No. 69 at 2.) PMC points to: “[b]y preprogramming subscriber station apparatus with information for processing length token information, the present invention enables said apparatus to determine the particular information bit” '217 Patent 32:5-8.

As to “programmable [control] processor[s],” PMC notes that it sought to include “instructions” in PMC’s Phase 1 proposed construction for “processor.” PMC notes that the Court’s Phase 1 preliminary construction rejected “instructions.” PMC contends that assuming the Court maintains such a position, the only issue presented relates to what is the meaning of “programmable.” PMC contends this is the same issue as presented above for Term 1. PMC

contends that as stated for that term, the issue is whether the term is limited to providing executable code to the processor or whether the term further encompasses a second scenario, instructing a processor to operate on preprogrammed instructions. (Dkt. No. 69 at 25.)

Vizio contends that during prosecution of the related U.S. Patent No. 7,783,252 (“the ’252 Patent”), PMC argued that “programming” can be defined as “a sequence of coded instructions that can be inserted into a mechanism (as a computer).” (Dkt. 198 Ex. A at 21.) Vizio contends that PMC relied on this definition to argue that prior art did not disclose a “programmable device” because it lacked the “ability to be ‘programmed’ with... ‘coded instructions.’” (*Id.*) As to PMC’s citation to ’217 Patent 32:5-8, Vizio contends that PMC conflates “programming” operating instructions with “processing” information. Vizio contends that PMC’s construction would broadly include, for example, inputting numbers into a processor to enable multiplication of those numbers. (Dkt. No. 196 at 3.)

Samsung contends that PMC shifts focus from the meaning of “programming” to the capability of what is being programmed. Samsung contends that the importance of the passage at ’217 Patent 32:5-8 is its disclosure of providing a sequence of operating instructions to the apparatus. Samsung contends that PMC’s argument of a second scenario to activate or enable processing is merely a hook for additional functionality that PMC attempts to graft into a straightforward term. (Dkt. No. 78 at 3.) Samsung further points to the ’6,649 Patent file history. Samsung contends that during prosecution, the applicants stated that the use of “programming” is “consistent with normal / usual usage” and cited to a Webster’s dictionary definition. Samsung reprints the argument:

And the noun form of "program", which includes the word "programming" in its definition, is:

"program or programme ... *n* ... 1 ... : a public notice 2 **a** : a brief usu. printed outline of the order to be followed, of the feature or features to be presented, and the persons participating (as in a public exercise, performance, or entertainment) **b** : the performance of a program; *esp* : a performance broadcast on radio or television 3 : a plan or system under which action may be taken toward a goal 4 : CURRICULUM 5 : PROSPECTUS, SYLLABUS 6 **a** : a plan for the programming of a mechanism (as a computer) **b** : a sequence of coded instructions that can be inserted into a mechanism (as a computer) or that is part of an organism 7 : matter for programmed instruction"

The verb form of "programming" is defined with the verb form of "program" and is:

"program also programme *vt* -grammed or -gramed; -gramming or -graming 1 **a** : to arrange or furnish a program of or for : BILL **b** : to enter in a program 2 : to work out a sequence of operations to be performed by (a mechanism) : provide with a program 3 : to insert a program for (a particular action) into or as if into a mechanism"

Applicants assert that these definitions are entirely consistent with Applicants' present and parent application. For example, the '81 disclosure describes a well known

Dkt. No. 78 Ex. A 10/10/2000 Amendment at 119. Samsung contends that this also conforms to other dictionary evidence. (Dkt. No. 78 at 3-4.)

Samsung contends that "programmable [control] processor[s]" presents the same issue. Samsung contends that it construes "programmable" consistent with the proper construction for "programming."

In reply, PMC contends that only its construction encompasses the second scenario of providing instructions to the processor to invoke preprogrammed functionalities. PMC contends that the portion of the file history cited by Samsung was referencing the noun version of "programming." (Dkt. No. 83 at 1-2.) PMC contends that PMC never suggested that the cited definitions controlled the verb construction. PMC contends that Vizio's file history suffers from the same deficiency. PMC contends that the citation does not define the verb "programming," because the claim then at issue, claim 3, used the words "programming" and "programmable

device” separately. (*Id.* at 2). PMC further contends that, in any event, this portion of the file history is not a disavowal because it dealt with a reference (Leventer) in which switches are used to select transmission protocols. PMC contends that in prosecution, it merely stated that Leventer did not allow “programming” of any type because it merely involved a switch to select transmission protocols. (Dkt. No. 83 at 2.)

The parties did not argue these terms at the oral hearing.

Analysis

The Court finds Defendants’ arguments to be more persuasive. As to PMC’s contention that a second scenario needs to cover sending signals to activate preprogramming of the processor, it is the preprogramming which is “programming” not the signal that activates the programming. Specifically, PMC points to the activation of preprogrammed functionality in the specification and states that it is the act of activating the preprogramming that is programming. However, the specification makes clear there is “preprogramming.” ’217 Patent 32:5-8. The subsequent activation of that programming is not described in the specification as programming, rather it is the programming ahead of time (“preprogramming”) that is the programming step. It is clear, through the use of the term “preprogramming” itself, that the “preprogramming” is the programming step. The act of providing subsequent activation signals to activate what has already been programmed is not “programming.” Moreover, the specification conforms to the prosecution history regarding the ordinary meaning of the term. In particular, PMC’s file history statements support Defendants’ position and the dictionary evidence cited by PMC in prosecution supports Defendants’ positions. (Dkt. No. 198 Ex. A at 21; Dkt. No. 78 Ex. A at 119.) Further, PMC’s construction is so broad as it would cover the prior art Leventer reference, which PMC contended in prosecution, and now still contends, did not allow ““programming’ of

any type.” (Dkt. No. 83 at 2.) Specifically, a switch such as in Leventer may be considered to provide a signal (information) to activate a desired processing functionality.

The Court construes programming [verb] to mean “providing a sequence of operating instructions.” The Court construes “programmable [control] processor[s]” to mean “[control] processors that can be provided with a sequence of operating instructions.”

3. media / medium ('217 Patent claims 1, 30, 31, and 38)

PMC	Vizio & Samsung Defendants
Forms of electronically transmitted programming, such as audio, video, graphics, text, and/or computer presentations.	Channel[s] of communication, such as radio, television, broadcast print, or Internet.

The parties dispute whether digital television is a single media or two media.

Positions of the Parties

PMC contends there are two disputes: (1) the general meaning of the term and (2) what examples should be included in the construction. PMC contends that the specification makes clear the medium is a “form of electronically transmitted programming;” “[t]he stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming...” ('217 Patent 167:52-55) and “[t]he programming so displayed (or outputted) may be any form of electronically transmitted programming including television, radio, print, data, and combined medium programming and may be received via any electronic transmission means...” (*id.* at 201:44-47). PMC contends that nothing in the specification limits “media” to “channels.” PMC further contends that even Defendants’ examples of “media” (radio, television, broadcast print, or Internet) are not channels, but rather consistent with PMC’s definition.

PMC contends that Defendants rely on a BPAI citation of a dictionary definition of “medium” as a “channel of communication.” PMC contends that the BPAI was dealing with the issue of how to distinguish “medium” from a “signal.” PMC further contends that the BPAI recognized that in the context of the claims, “medium” was not only a channel of communication, but that “medium is the picture and sound information carried by the television signal or the caption information.” (Dkt. No. 69 Ex. 8 (2009 BPAI Decision) at 24.)

PMC contends that its listed examples of “media” are consistent with the specification and the Court’s preliminary constructions in the Phase 1 hearing. PMC requests that the Court amend the list to make clear that “computer programs” are also forms of media. PMC contends that the Background of Invention makes clear that conventional “broadcast” media may be combined with “the capacity of computers to process and output user specific information” and the “new media that result from such combinations are called ‘combined’ media.” ’217 Patent 1:55-65. PMC notes that the specification then states that “stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data and combined medium programming.” ’217 Patent 167:52-55.

Vizio contends that the term is limited by the file history. Vizio points to PMC’s argument to the Board that:

...”medium” and “media” which connote a channel of communications. Accordingly, the ‘content’ of a medium should be interpreted to mean the substance, gist, meaning or significance of a channel of communications.

(Dkt. No. 196 Ex. F, Appeal Br at 32-33.) The Board then defined a medium as a “channel of communication” “such as radio, television, newspaper, book or Internet.” (Dkt. No. 196 Ex. N, Appeal Decision at 23.) Vizio also contends that its construction conforms to the Notice of Allowance which stated “medium—a channel of communication such as radio, television,

newspaper, book or Internet.” (Dkt. No. 196 Ex. B Notice of Allowance at 2.) Vizio contends that PMC’s construction of “media” would allow PMC to argue that conventional television is a “multimedia presentation” because it is composed of both audio and video. Vizio states that the specification makes clear that television is a single channel used to communicate a single medium presentation, even though it contains both audio and video:

This method provides techniques whereby, automatically, **single channel, single medium presentations, be they television**, radio, or other electronic transmissions, may be recorded, coordinated in time with other programming previously transmitted and recorded, or processed in other fashions.

’490 patent 3:51-56 (emphasis added). Vizio contends that PMC cannot cite a single embodiment for the broad proposition that “audio” and “video” each comprise a single medium. Vizio states that the ’490 specification describes combining television and radio (18:8-29), television and broadcast print (20:11-38) and television and data (18:43-68). As to PMC pointing to the following sentence in the Patent Office’s Appeal Decision for support: “the medium is the picture and sound information carried by the television signal or the caption information,” Vizio contends this sentence is more correctly read to say that television, which contains picture and sound information, is but a single medium. Vizio contends that, regardless, this sentence cannot contradict PMC’s unambiguous definition that the Board explicitly adopted (in the same Decision) and that the Examiner relied upon to award the claims.

Samsung contends that PMC attempts to insert “forms of electronically transmitted programming” into the construction, but PMC fails to draw any correlation, from the intrinsic record or otherwise, between “media/medium” and “forms of electronically transmitted programming.” Samsung asserts that PMC’s reliance on the preliminary construction of “multimedia signals” in Phase One (“signals that include information for multiple forms of media...”) is misguided; that refers to a different concept, from a different claim from a patent

not asserted here. Samsung contends that the traveling signal within a medium and the medium itself are wholly separate notions and that the signals described merely include information for media—this cannot be a definitional statement about what constitutes a medium. Samsung also objects to PMC inserting “computer presentations” into the construction. Samsung contends that such language is not part of the Phase 1 preliminary construction of “multimedia signals” and that “computer presentation” is not mentioned anywhere in the patent specification. (Dkt. No. 78 at 4-5.)

Samsung also points to the applicants’ file history statement:

Given the express use of the term “content” in the specification to refer to the information viewed by a user, the logical choice for the definition of “content” in this context is “substance,” “gist,” “meaning” or “significance.” Accordingly, “content” is properly construed to mean “substance,” “gist,” “meaning” or “significance” in contrast to “form” or “structure.” This definition is in accord with the use of the term “content” with the terms “medium” and “media” which connote a channel of communications. Accordingly, the “content” of a medium should be

(Dkt. No. 78 Ex. C (03/07/2005 Appeal Brief) at 32 (annotation added).) Samsung further points to the Notice of Allowance:

3. Claims 2, 5, 6, 8-10, 15-18, 20, 21, 23-27, 29, 33, 34, 36-42, 67, 69-71, 73-76, 78, 79, 81, 82, 84, 85, 87, 89-91, 93-97, 99-102, 105 and 106 are allowed.

In regard to said claims the prior art of record fails to teach or suggest the respective claim limitations when considered as a whole and when read in light of the following interpretations disclosed by the Board of Patent Appeals and Interferences in the 1/13/09 decision:

- **medium** – a channel of communication such as radio, television, newspaper, book or Internet (p. 23)

(Dkt. No. 78 Ex. D at 2 (annotation added).)

In reply, PMC contends that the Defendants rely on out of context statements by the BPAI and the Examiner regarding a different dispute. PMC contends that Defendants fail to rebut that the BPAI recognized that a medium is not merely a channel, but rather the “picture and sound information” carried by a channel. PMC contends that this conforms that “medium” refers to the form of electronically transmitted program. (Dkt. No. 83 at 15.)

At the oral hearing, it became clear that the parties’ dispute centered upon whether digital television is a single media or two media: a separate video media and a separate audio media. PMC acknowledged that conventional analog television of the 1980s is a single media. (Dkt. No. 237 at 63-65.) However, PMC contends that modern television is two media. In particular, PMC contends that the packetized communication transmission techniques of digital television result in two media, because audio information in the television transmission stream is contained in audio data packets and video information in the television transmission stream is contained in separate video data packets. (*Id.* at 64-65.)

Defendants contested PMC’s distinction between analog and digital television streams. Defendants contend that both streams are a single media. Defendants contend that in analog television the sound and video were similarly transmitted as separate information combined into the television stream, though not as separate packets but rather separated by different carrier frequencies. (*Id.* at 72-73.) Defendants contend that in all cases, the specification describes television as a single media. Defendants assert that the patent was about combining two separate media, not dissecting a television signal into two components and calling those two components two separate media. (*Id.*)

Analysis

PMC contends that digital television transmission streams contain information of two

types, audio and video information. Further, PMC contends that this information is separated in the television signal. However, the same can be said for traditional analog television. That one separates the information via data packets and the other separates the information via carrier frequencies is a distinction that is not identified as being relevant in the patent with regard to the meaning of “media.”

The intrinsic record is clear that television is a single medium: “[t]his method provides techniques whereby, automatically, single channel, single medium presentations, be they television, radio, or other electronic transmissions, may be recorded, coordinated in time with other programming previously transmitted and recorded, or processed in other fashions.” ’490 patent at 3:51-56. Further, television was clearly a single type of programming: “[t]he stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data and combined medium programming.” ’217 Patent 167:52-58. This also conforms to the examples in the specification. The Wall Street Week programming transmission was not described as a multimedia program because it was a television signal with audio and video, but rather was described as multimedia programming because a television signal was combined with separate computer generated graphics. *See* ’490 Patent 19:30-68; ’217 Patent 11:25-15:14, Figures 1, 1A, 1B and 1C. Similarly, the Julia Childs television program is not described as two media merely because the television program has audio and visual. Rather, it is the separate coordination of print media with the television media that is described. ’490 Patent 20:12-68.

Moreover, the ’217 Patent specification is explicitly clear that “television” may include digital television transmissions: “...portions of the television picture that are covered by locally generated overlays (which in digital television transmissions can include frames of transmitted

video that are "frozen" after reception in fashions well known in the art)" ('217 Patent 236:22-26), "digital video and audio television transmissions" ('217 Patent 144:57-58) and "[i]n example #7, the program originating studio that originates the 'Wall Street Week' transmission transmits a television signal that consists of so-called 'digital video' and 'digital audio,' well known in the art" ('217 Patent 149:47-50). PMC has not pointed to any intrinsic record citation that makes clear that, as used in the specification, "television" was meant to be limited to analog television. Rather, when viewed in its entire context the specification is clear that "television" may include analog or digital television. PMC argued at the hearing that the specification notes that combining television with a radio simulcast is combined programming. However, PMC misses the point that it is not the audio that is a part of the television signal stream but rather a separate audio stream from another media, in this case radio. Thus, as described in the '490 specification, the multiple media is obtained by combining television with something else, television and radio, television and broadcast print and television and data. '490 Patent 18:8-29, 20:11-38 and 18:43-68.

The file history further supports Defendants' contention that the audio and visual content of a television signal is but one media. More particularly, the Board's and PMC's statements in the appeal passages, cited by Defendants above, make clear that television is viewed as a single media. Also, in additional passages, the Board referenced television programming as a single medium. The '217 Patent Board decision stated: "where the second medium is a broadcast television," "where the second medium is the television program" and "both a television program medium ("first medium") and ..." (Dkt. No. 69 Ex. 8 at 67, 68 and 71 (Jan. 13 2009 BPAI Decision).) Further, even a passage that PMC cites to from the '217 Patent Board decision supports the proposition that television is a single medium. The passage states that "the medium

is the picture and sound information carried by the television signal or the caption information.” (*Id.* at 24.) Here, the Board clearly states that the “picture and sound information” (emphasis added) carried by the television is a medium. The television signal itself is not treated as multimedia.

The Court construes “media” / “medium” to mean “forms of electronically transmitted programming, such as audio, video, graphics, and/or text, television programing (including its video and audio components) is a single form of media.”

4. subset of [a/said] plurality of signals ('217 Patent claim 38)

PMC	Vizio Defendants	Samsung Defendants
Portion of [a/the] larger set of signals.	Defendants contend the Court should construe the longer phrase “receives a subset of a plurality of signals.” To the extent a construction is required for the shorter phrase here, Defendants propose: Less than the full set of the plurality of signals.	No construction necessary.

The parties dispute whether a subset must be “less than” the full set.

Positions of the Parties

PMC contends that the surrounding language of claim 38 makes the limitation clear: “a receiver that receives a subset of a plurality of signals from an external source” ... “said subset of said plurality of signals comprises a plurality of said plurality of signals.” PMC contends that the clear claim language does not limit the term to “less than the full set,” but rather only requires the subset include more than one signal from the given set of signals (a “plurality of said plurality of signals”). (Dkt. No. 69 at 5.) PMC contends that the claim language does not exclude the plurality of signals being just two signals and the subset being equal the two signals. PMC

contends that Vizio’s construction reads out the possibility of the subset being equal to the set. PMC contends that its construction is consistent with the dictionary definition cited by Vizio: (1) “a set (as of data) that is itself an element of a larger set” and (2) “a mathematical set each of whose elements is also an element of a given set.” (Dkt. No. 69 at 6 (quoting Webster’s Third New International Dictionary (1981)).) PMC contends that the dictionary definition does not exclude a subset from being equal to a given set. PMC contends, in set theory, it is taught in middle school mathematics that subset A of set B is less than or equal to B. PMC contends that a simple Google search confirms this. (Dkt. No. 83 at 3.) PMC contends if the plurality of signals is ten signals, then the subset may be two to ten signals. PMC contends that it is antithetical to set theory to require otherwise. (*Id.*)

Vizio contends that PMC clearly intends to interpret the term to be “less than or equal to.” Vizio states that PMC argues that whenever a microcomputer receives a plurality of signals, then the microcomputer also receives a subset of the plurality of signals because the subset can equal the full set. Vizio contends that PMC’s construction renders “subset” meaningless. (Dkt. No. 196 at 5 (citing *Merck & Co., Inc. v. Teva Pharm. USA, Inc.*, 395 F.3d 1364, 1372 (Fed. Cir. 2005) (“A claim construction that gives meaning to all the terms of the claim is preferred over one that does not do so”)).) Vizio contends that the limitation is important because it was added by an Examiner’s amendment. (*Id.* (citing Dkt. 196 Ex. B at 17).)

Samsung contends that PMC improperly allows the subset to be the same as the set. Samsung contends that PMC uses the term “portion” in PMC’s construction. Samsung contends that “portion” does not generally mean the whole thing. (Dkt. No. 78 at 6-7.) Samsung contends that the Webster’s dictionary recites “an element of a larger set,” which contradicts PMC. Samsung contends that the term “subset” is not highly technical and does not need construction.

The parties did not argue this term at the oral hearing.

Analysis

PMC contends that the term means “less than or equal to,” yet PMC’s own construction contradicts inclusion of “equals to.” In particular, PMC’s construction references “larger set,” and as such PMC itself states that the plurality of signals is “larger” than the subset. Though PMC may be correct that the strict definition in mathematical set theory may include “some or all,” the context of the claims and the specification is more important. *See Phillips*, 415 F.3d at 1317. The language of the claim (“said subset of said plurality of signals comprises a plurality of said plurality of signals”) implies the subset is not all of the plurality of signals. Moreover, the relationship of the claim elements requires the subset of claim 38 to not include all of the plurality of signals. In particular, claim 38 recites (1) “receives a subset of a plurality of signals,” (2) “said plurality of signals includes a first medium and a second medium,” and (3) “wherein said second medium is not included in said subset of said plurality of signals.” Thus, the claim language explicitly rejects PMC’s interpretation of “some or all.” Further, “subset” is not utilized in the specification and PMC has not identified any teaching in the specification in which the plurality of signals includes a second medium and the “portion” of the plurality of signals does not include the second medium, yet the “portion” somehow includes all of the plurality of signals.

The Court construes “subset of [a/said] plurality of signals” to mean “less than all of another set of signals.”

5. timing of communicating [television programming] ('2,649 Patent claim 1)

PMC	Vizio Defendants	Samsung Defendants
This term does not require	No construction necessary.	Synchronization of the

construction beyond its plain and ordinary meaning. To the extent a construction is necessary, PMC proposes: Timing of passing information from one device or component to another device or component.		receiver station operations and programming transmissions
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The primary dispute is whether “timing” is limited to synchronizing with a receiver station.

Positions of the Parties

PMC cites to the context within claim 1 of the receiver station “controlling the timing of communicating television programming in accordance with said message stream.” PMC contends that the claim is not limited to synchronization of the receiver station, which is just one example in the specification. (Dkt. No. 69 at 7.) PMC notes that the specification merely states that the signals “can” synchronize the operation. ’217 Patent 7:54-57 (noting that signals “occur at precise times in programming and can synchronize the operation of receiver station apparatus to the timing of programming transmissions”). PMC contends, though, that the claim merely states timing “in accordance with said message stream,” specifying that the communicating can be based on the nature of the signals embedded in the incoming transmission. (Dkt. No. 69 at 7.) PMC contends that the manner of controlling the “timing” is not limited to “synchronization” because, elsewhere, the specification states that “timing, and location of embedded signals may vary.” ’217 Patent 7:47-48. PMC further states that “communicating” is not limited to interactions between the receiver station and the programming transmissions, because the specification discloses “authorized subscribers” and “subscriber stations.” *Id.* at 7:43-46.

Vizio contends that if construed, Samsung’s construction should be used. (Dkt. No. 196 at 6.)

Samsung contends that the claim states that the timing is “in accordance with said message stream” received at the receiver station and the specification discloses that the embedded signals (i.e., the message stream) can be used to “synchronize the operation of receiver station apparatus to the timing of the programming transmissions.” ’217 Patent 7:55-57.

The parties did not argue this term at the oral hearing.

Analysis

Samsung seeks to limit the term to an embodiment within the specification. However, Samsung has not pointed to any disavowal or disclaimer supporting such limitation. *Arlington Indus., Inc. v. Bridgeport Fittings, Inc.*, 632 F.3d 1246, 1254 (Fed. Cir. 2011) (“[E]ven where a patent describes only a single embodiment claims will not be read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope using words of expressions of manifest exclusion or restriction.”) (citation omitted). Moreover, the claim merely states “controlling the timing of communicating television programming in accordance with said message stream.” Samsung is correct that the specification states that embedded signals (i.e., the message stream) can be used to “synchronize the operation of receiver station apparatus to the timing of the programming transmissions.” However, Samsung is seeking to add an additional limitation as to what the message stream is used for. The claim limitation merely requires timing the communication with the message stream, it does not provide the additional requirement that the message stream is used for synchronization. Thus, synchronization of the receiver station operations and programming transmissions is not required by this term.

The Court finds that “timing of communicating [television programming]” has its plain and ordinary meaning.

6. variable formats ('6,649 Patent claim 9)

PMC	Vizio & Samsung Defendants
This term does not require construction beyond its plain and ordinary meaning. To the extent a construction is necessary, PMC proposes: Arrangements or structures of data that can be changed or adapted.	Changing format that is not a set, proper format.

The parties dispute whether the formats must change or be capable of change and whether the file history defines the term to not be a “set, proper format.”

Positions of the Parties

PMC contends that the term does not need to be construed, consistent with this Court not construing similar “varying” terms at issue in *PMC v. Motorola, Inc.*, No. 2:08-cv-70-CE, Dkt. 271 at 34-35 (E.D. Tex. Sept. 30, 2011). PMC objects to Defendants’ construction for two reasons.

First, PMC contends Defendants’ construction requires the format to change even though the term says “variable,” which signifies a capacity to change. PMC contends that varying and variable are thus two different concepts. Further, PMC contends that the specification uses both terms separately, indicating they have different meanings: signals being “placed, within the transmissions, in locations that are unvarying and unvariable.” '490 Patent 2:51-54. PMC contends the claim makes clear the formats are variable and when varying occurs, at least two of locations, timing lengths, and schemes must vary. PMC contends that Defendants transform this language into “varying the formats.”

Second, PMC objects to Defendants’ inclusion of “set, proper format” from the prosecution history. PMC contends that Samsung’s reference to a 1997 Amendment was with reference to defining “television signaling scheme” not “variable formats.” Further as to “set, proper,” PMC contends that “set” appears nowhere in the citations provided by Defendants. As to “proper,” PMC contends that, in prosecution, PMC was merely distinguishing the Zawels

reference by noting Zawels' own words in which transmissions were in "proper formats." PMC contends that it is clear that PMC was not unequivocally suggesting that Zawels' term of art ("proper format") was something definitional. (Dkt. No. 83 at 5.) PMC further contends that elsewhere in the same prosecution passage, the applicants stated that Zawels was not "capable of varying formats as disclosed in the present invention." (Dkt. No. 196 Ex. C (Feb. 17, 1998 Amendment) at 66.)

Vizio contends that the claim requires "variable formats including at least two varying locations, varying timing lengths and varying encryption schemes." Vizio contends that, thus, the format must vary and not merely have the capability to change. (Dkt. No. 196 at 6.) Vizio contends that "proper" comes from the file history where PMC distinguished a prior art signal that was "not transmitted in varying formats, [but] is transmitted only in the 'proper format.'" (*Id.* (quoting Dkt. No. 196 Ex. C (Feb. 17, 1998 Amendment) at 66).)

Samsung contends that its construction flows from the intrinsic record. Samsung contends that the applicants defined "variable formats" as "varying locations, timing and lengths, including variable encryption schemes." (Dkt. No. 78 Ex. G (July 28, 1997 Amendment) at 40.) Samsung also contends that the 1981 specification was critical of signals placed within transmissions in locations that are "unvarying and unvariable." (Dkt. No. 78 at 9 (citing '490 Patent 2:51-54).) Samsung also cites to the 1998 Amendment that used the term "proper."

The parties did not argue this term at the oral hearing.

Analysis

The claim term is clearly "variable" not "varying." The context of the term, as used in the claim, may provide substantial guidance as to the term's meaning. *Phillips*, 415 F.3d at 1314.

Here, the context of the surrounding claim language makes clear that the term is directed to programming the station to have the capability to process variable formats: “programming said programmable receiver station with multiple signal processing schemes to process television programming signals encoded in variable formats in accordance with said multiple signal processing schemes, said variable formats including at least two of varying locations, varying timing lengths and varying encryption schemes.” As to the file history, a clear disclaimer has not been shown, and PMC provides the better interpretation of the passages in question. *See Omega Eng. v. Raytek Corp.*, 334 F.3d 1314, 1324 (Fed. Cir. 2003) (“As a basic principle of claim interpretation, prosecution disclaimer promotes the public notice function of the intrinsic evidence and protects the public’s reliance on definitive statements made during prosecution.”)

The Court construes “variable formats” to mean “formats that can be changed or adapted.”

7. varying locations ('6,649 Patent claim 9)

PMC	Vizio & Samsung Defendants
This term does not require construction beyond its plain and ordinary meaning. To the extent a construction is necessary, PMC proposes: Changing order, placement, or location.	Changes in the place where a television programming signal can be found within a transmission.

The focus of the parties’ dispute is on PMC’s inclusion of “order.”

Positions of the Parties

PMC notes that this District previously construed the identical term, “varying locations,” to have its plain and ordinary meaning. *PMC v. Motorola, Inc.*, No. 2:08-cv-70-CE, Dkt. 271 at 35 (E.D. Tex. Sept. 30, 2011) (referred to by the parties as the *Echostar Order*). PMC contends that in *PMC v. Motorola*, the Court did not limit “location” to where a “television programming signal” is

within a transmission but generally found that “location” referred to “some part or portion of a television transmission.” *Id.* PMC points to the specification statement that the signals “may appear in various and varying locations . . . they may appear on one line in the video portion of the transmission, or on a portion of one line, or on more than one line . . .” ’490 Patent 4:17-20. PMC contends that this passage teaches that varying a location includes changing the order of the signal, rather than simply its placement “within a transmission.”

Vizio objects to PMC’s inclusion of varying the “order” within the meaning of varying the “location.” Vizio contends that the specification teaches that the location is varied by moving the signals among lines of a frame. ’490 Patent 4:17-22. Vizio contends these are changes in the location within a transmission. Vizio contends that there is no support for the proposition that merely changing the order of signals is considered to be varying locations. Vizio contends this also conforms to the characterization of the prior art in the specification where it was stated that the prior art only transmitted signals “placed, within the transmissions, in locations that are unvarying and unvariable.” ’490 Patent 2:51-54. Vizio contends this is consistent with *PMC v. Motorola* which found that a “location” is “some part or portion of a television transmission.”

Samsung contends that there is no teaching, intrinsic or extrinsic, that one of skill in the art would interpret “locations” to have the construction advanced by PMC. Samsung contends that Defendants’ construction is in conformance with construction in *PMC v. Motorola*. Samsung further notes that the specification describes a signal as “one full discrete appearance of a signal embedded at one time in one location on a transmission.” ’490 Patent 3:3-5.

The parties did not argue this term at the oral hearing.

Analysis

The claim term is “location.” PMC has pointed to no evidence that equates the order of a signal in a transmission to the location. The specification passage PMC cites to (’490 Patent

4:17-20) does not mention “order” and provides no teaching that merely varying the order inherently varies the location. A signal that may have a varying order compared to other signals but is in the same location has not been varied in location, only varied in order. PMC has not pointed to intrinsic evidence that redefines the “location” to further include the “order” of the signal. Defendants’ positions, in effect, conform to the rationale in the *PMC v. Motorola* order. *PMC v. Motorola, Inc.*, No. 2:08-cv-70-CE, Dkt. 271 at 35 (E.D. Tex. Sept. 30, 2011).

The Court construes “varying locations” to mean “changes in the place where a television programming signal can be found within a transmission.”

8. varying timing lengths ('6,649 Patent claim 9)

PMC	Vizio & Samsung Defendants
Changing amount of time required to transmit information.	Indefinite.

Defendants contend the term is not used in the specification and is not reasonably definite.

Positions of the Parties

PMC contends that term is a common term and has a commonsense meaning corresponding to PMC’s construction. PMC contends that the *PMC v. Motorola* construction found that “varying the pattern of timing” to have its plain and ordinary meaning. *PMC v. Motorola, Inc.*, No. 2:08-cv-70-CE, Dkt. 271 at 35 (E.D. Tex. Sept. 30, 2011). PMC contends that the specification equates “length of time” with “timing length.”

Following the transmission of each message, for a particular interval of time no SPAM information is transmitted that causes any processing at any apparatus of the apparatus version of message. Said interval is the length of time required for the slowest apparatus of said apparatus version to receive said message, record the operating system instructions and information of said message, and commence operating under control of said instructions and information.

'217 Patent 273:11-19.

PMC further contends that simple semantics shows that “varying timing lengths” means “changing lengths of time.” PMC states that Vizio’s expert (Dr. Reader) understood the meaning of “varying length of time.” (Dkt. No. 196-23 at ¶180.) PMC contends that “varying timing lengths” is merely another way of saying “varying length of time.”

Vizio notes that the term in *PMC v. Motorola* was a different term (“varying the pattern of timing”), thus presumably having a different meaning than the term in dispute here. Vizio contends “varying the timing lengths” has no meaning in the art nor in the intrinsic record and points out that PMC did not identify any intrinsic evidence to support PMC’s position. (Dkt. No. 196 at 7.) Vizio notes that the specification does reference “varying lengths” and “varying timing,” but the specification does not reference “varying timing lengths.” Vizio contends that PMC construes the term to mean “lengths of time,” but Vizio contends these are different words. Vizio notes that the specification does reference “time interval,” which may be synonymous with “length of time,” but that the claim did not use “time interval.” Vizio contends that this reinforces that “timing length” means something different than “length” or “interval of time.” (*Id.*)

Vizio further points to PMC’s infringement contentions that accuse (1) packets which have “variable amounts of time to transmit and receive,” and (2) encoded video access units that have “varying timing length that can depend on the bit-rate, and whether the bit-rate is constant or variable.” (Dkt. No. 196 Ex. D (’6’649 infringement contentions) at 11.) Vizio further points to PMC’s contentions as also reading on the MPEG-2 standard which allows for some packets of “variable lengths.” (*Id.* at 12.) Vizio contends that PMC’s interpretations include a length of time, a transmission rate, and a packet length, further revealing the uncertain scope of the term. Vizio contends that a person of ordinary skill would not be able to determine which, if any, is the correct interpretation. (Dkt. No. 196 at 8 (citing Reader Decl. at ¶164).)

Samsung contends that the term is not a term of art and that PMC offers no specification support. Samsung contends that there is no frame of reference as to whether the term is referencing the length or size of the signal or referencing the length of time. Further, Samsung contends that if referencing the length of time, it is not clear if the term is referencing the time to transmit one signal verse another or referencing a shorter verse longer program that is being transmitted. (Dkt. No. 78 at 10.)

At the oral hearing, Defendants pointed to '6,649 Patent claim 12 which recites:

said television signaling scheme defining the programming and information content in said variable formats including varying locations in said television program material, timing, lengths and encryption schemes;
transferring said one or more instruct signals from said transmitter station to said transmitter; and
transmitting said television program material and said one or more instruct signals from said transmitter station to said one or more receiver stations wherein said one or more instruct signals are effective to implement said television signaling scheme....

Defendants, in particular, contend that by reciting “varying locations in said television program material, timing, lengths and encryption schemes” the claim highlights that “timing” and “length” are different. (Dkt. No. 237 at 58.)

Analysis:

The term itself and the specification give guidance that the term relates to the length of time. The specification describes time intervals that may change and states that these intervals are lengths of time. '217 Patent 273:11-19. Further, signals are described in the specification as transmitted for “predetermined time intervals.” '490 Patent 9:41-46. As acknowledged by Vizio’s expert, a construction of “changing the amount of time” would make sense if the disputed term was “varying length [of time]....” (Dkt. No. 196-23 at ¶180.) The Court finds that, in context, “varying timing lengths” has the same meaning Vizio’s expert prescribes to “varying lengths of time.” In context of the intrinsic record and the claim language itself, the term is

reasonably certain. Vizio contends that the infringement contentions raise doubts as to the terms meaning. As presented, those contentions raise questions as to infringement, but do not change the Court's construction. As to Defendants' citation to claim 12, which recites both a format's timing and length features, this does not establish that a feature of the timing cannot be the length of the time. A format may have a length, while the timing of a format may also have a time length.

The Court construes “varying timing lengths” to mean “changing amount of time required to transmit information.”

9. code / code portion ('775 Patent claim 2, 3, 6, 11, 12, and 13)

PMC	Vizio Defendants	Samsung Defendants
(code) Digitally encoded information.	(code) One or more instructions.	“Code” is not present in any asserted claim.
(code portion) Digitally encoded information that is a part of a larger information transmission.	(code portion) Part of a program instruction set.	(code portion) Part of a program instruction set.

The parties dispute whether “code” must include “instructions.”

Positions of the Parties

PMC objects to Defendants' attempts to limit “code” to program instructions. PMC contends that its construction is consistent with the claim language:

receiving an information transmission containing a code portion;
receiving a control signal;
receiving the code portion of said information transmission and transferring it to the detector;
detecting data in said received and transferred code portion and passing said data to said processor;
processing said detected and passed data to produce said at least some of said video image;

'775 Patent claim 11. Further, PMC points to claim 21 which depends from claim 11 and states: "wherein said receiver station receives at least one complete video image in a signal transmitted from a remote station," and

detecting at least one computer program instruction in said signal transmitted from said remote station;

storing said detected at least one computer program instruction; and subsequently processing data detected in said code portion to produce video in accordance with said at least one computer program instructions.

'775 Patent claim 21.

PMC contends that Defendants seek to equate two different terms in the claims – "computer program instructions" and "code portion." PMC contends that Defendants further seek to incorporate the "computer program instructions" of dependent claim 21 into claim 11, where the term does not appear. (Dkt. No. 69 at 11.)

PMC contends that its construction is consistent with the claims and the specification. PMC notes the claims recite "code portion of said information transmission" which includes "data" that is detected and processed. PMC points to the specification: "[i]n the present invention, the embedded signals contain digital information that may include addresses of specific receiver apparatus controlled by the signals and instructions that identify particular functions the signals cause addressed apparatus to perform" ('217 Patent 7:59-63) and "[e]xamples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio" (*id.* at 8:28-30). PMC contends that its construction is consistent with the specification that "code" refers to "digital information" which may include, but is not limited to, instructions.

As to the Phase 1 preliminary construction that "downloadable code" is "one or more instructions received in a transmission from a remote source," PMC contends that result flowed

from the different claims at issue in Phase 1 in which the “downloadable code” served as the “basis” for “controlling a decryptor....” PMC contends that the claims at issue here are not drafted in a manner relating to “instructions” and instead the claims are broader. (Dkt. No. 69 at 13.)

Vizio contends that “code portion” is only discussed in the specification in the context of instructions causing processors to operate or instructions executed by processors: “[t]hen SPAM-controller, 205C, commences executing the code portion of said load-run-and-code instructions” ('217 Patent 54:48-49) and “[t]hen the code portion of said load-run-and-code instructions cause SPAM-controller, 205C, to operate in a fashion that differs from the fashion of said first message” (*id.* at 73:41-42). Vizio contends that claim 21 does not provide claim differentiation because unlike “computer program instruction,” the “code portions” described in the specification can be executed by specialized controllers in the receivers, such as SPAM-controller 205C and controller 39J. (Dkt. No. 196 at 10 (citing '217 Patent 52:15-29, 88:47-52).)

Vizio contends that PMC’s construction attempts to circumvent the Court’s Phase 1 preliminary construction of “downloadable code” which is part of an “encrypted digital information transmission” in the Phase 1 '635 Patent claim 33. Vizio contends that PMC offers no evidence why “code portion,” which is similarly part of an “information transmission,” should be construed differently. (*Id.*)

Samsung objects that PMC attempts to broaden “code portion” to encompass any digital “information,” yet the claims specifically distinguish “code portion” from the rest of the transmission. Samsung contends PMC’s construction renders such distinction meaningless. Samsung contends that the specification references “code portion” as part of a program instruction set. (Dkt. No. 78 at 11 (citing '217 Patent 88:51-52 (“said load-run-and-code

instructions cause control processor, 39J, to commence executing the code portion of said instructions") '217 Patent 54:48-67 ("Then SPAM-controller, 205C, commences executing the code portion of said load-run-and-code instructions...."); '217 Patent 54:40-46, 73:41-42.) Samsung further notes that during prosecution PMC identified a section of the '775 Patent entitled "Transmitting and Receiving Program Instruction Sets" as providing written description of the claims. (*Id.* at 11-12.)

Samsung contends that PMC's specification citations do not relate to "code portion" at all. As to claim 21, Samsung also notes that claim 21 is limited to "computer program instructions." Further, Samsung notes that dependent claim 19 recites a "first processor instruction" that resides in the "code portion," making clear that the code portion is part of a program instruction set.

As to dependent claim 19, PMC states that this merely demonstrates that the "code portion" would contain "data" and the "first processor instruction." At the oral hearing, PMC emphasized its concern that Defendants' construction would exclude a code portion from including data. (Dkt. No. 237 at 110-114.) Defendants responded that instructions may contain data within the instruction and that Defendants' construction did not prohibit data from being contained in the instruction. (*Id.* at 116.)

Analysis

As discussed in the Phase 1 claim construction order, "code" can have varying meanings. Just as with regard to "downloadable code" in the Phase 1 dispute, here in context of the specification, "code portion" is used in context of program instructions. As noted by PMC, code portion may also include "data" and is not limited to just instructions. Thus, as described in the specification, instructions may include data. '217 Patent 222:26-37. However, in context of the

specification descriptions, it is the inclusion of the instructions which makes the portion a “code portion.” *See* ’217 Patent 54:48-67, 73:41-42, 88:47-52.

The Court construes “code” to mean “one or more instructions.” The Court construes “code portion” to mean “part of an instruction set.”

10. an expanded [and contracted] code portion ('775 Patent claims 2, 6, and 11)

PMC	Vizio Defendants	Samsung Defendants
Longer [and shorter] code portion.	Indefinite	(an expanded . . . code portion) A code portion that changes in volume from smaller to larger. (a contracted code portion) A code portion that changes in volume from larger to smaller.

Samsung contends the term requires a code portion to change. Vizio contends the term is indefinite. PMC contends that the term relates to the code length.

Positions of the Parties

PMC points to the specification statements of: (1) “a SPAM message containing expand-to-full-field-search execution segment information” causing “decoders, 203, to commence detecting digital information in every frame of its received video information from the first detectable portion of line of said frame to the last detectable portion of the last line of said frame” and (2) “a SPAM message containing resume-normal-location-search execution segment information” causing “line receivers, 33, to commence detecting digital information in the normal transmission location of every frame of its received video information.” ’217 Patent 236:29-44, 236:60-67, 237:23-30. PMC also contends that its construction is in accord with the

plain and ordinary meaning of “expanded” as “longer” and “contracted” as “shorter,” as the applicants explained in distinguishing the claim over the prior art:

The Office Action confuses Zaboklicki’s decoding (from Webster’s Dictionary, 1a: to convert, e.g., as a coded message, into intelligible form; b: to recognize and interpret, e.g., an electronic signal; 2: decipher,) with expanding (a: to open up : unfold; b: to increase the extent, number, volume, or scope of : enlarge,) and contracting (a: limit, restrict, ...c: to draw together: concentrate; d: to reduce to smaller size by or as if by squeezing or forcing together).

(Dkt. No. 69 Ex. 17 (July 22, 1997 Amendment) at 26.)

PMC contends that Samsung cites the inventors’ July 22, 1997 Response to Office Action. PMC contends that there, the inventors amended then claim 20, dependent on then claim 17, to recite:

The method of claim 17, further comprising the step of programming said receiver station selectively to receive at least two [or more] specific code portions, a first of said at least two [or more] code portions having a greater signal volume being an expanded code portion, a second of at least two [or more] code portions having a lesser signal volume being a contracted code portion.

(*Id.* at 5 (underlines and brackets in original).) PMC contends that the use of “greater signal volume” and a “lesser signal volume” supports PMC’s construction.

As to Samsung’s construction, PMC contends that “expanded” and “contracted” are adjectives to describe “code portion.” PMC contends that Samsung defines the term as a verb (“a code portion that changes”). Further, PMC contends that Samsung acknowledges that Samsung’s construction would render claims 2, 11 and 23 as being directed to the same embodiment (“volume”). However, PMC contends that only claim 23 specifies “volume.”

Vizio contends that the intrinsic record does not provide an objective reference framework for what constitutes “an expanded code portion” and “a contracted code portion.” Vizio states that the terms do not indicate whether “a contracted code portion” is shorter than some typical code portion, shorter than “an expanded code portion,” or shorter than that same

code portion once was. (Dkt. No. 196 at 11 (citing Reader Decl. at ¶ 33).) Vizio notes that '775 Patent claim 23 recites “a greater signal volume being an expanded code portion” and “a lesser signal volume being a contracted code portion.” But Vizio contends that claim 23 provides no objective reference framework to determine what constitutes objectively certain scopes of “lesser” and “greater.”

Vizio further states that the intrinsic record also fails to provide guidance as to a measuring unit for this term. Vizio states that there is no guidance as to whether “expanded” and “contracted” refer to the length of each code portion, the amount of information in each code portion, the duration of the transmission for a code portion as measured by time, or how the code portion is expanded and contracted, etc. (*Id.* (citing Reader Decl. at ¶¶ 34, 42, 54, 62, 69).) Vizio states that the numerous distinct possibilities regarding the uncertain measuring units makes the scope of “an expanded [and a contracted] code portion” indefinite to a person of ordinary skill in the art. (Dkt. No. 196 at 12 (citing *Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1370-71 (Fed. Cir. 2014) (“It is not enough . . . to identify ‘some standard for measuring the scope of the phrase’ . . . the claims “must provide objective boundaries for those of skill in the art.”))).

Vizio contends that PMC misreads the portion of the specification which discusses the “expand-to-full-field search execution segment information.” '217 Patent 236:29-44. Vizio contends that this discussion refers to an expanded search for information – not a “code portion” that is expanded. Similarly, Vizio contends that the specification discusses the “resume-normal-location-search execution segment information” with reference to a search location, not to a code portion that is contracted.

As to PMC’s dictionary definitions it submitted during prosecution, Vizio contends that these definitions still lack an objective frame of reference or unit of measure to determine

whether there has been an “increase [in the] extent, number or volume” that constitutes “expanded” or a “reduc[tion] to smaller size” that constitutes “contracted.” *Id.*

Vizio also contends PMC’s construction is incorrect because the prosecution history requires the claim to have one code portion that is both expanded and contracted, instead of two code portions. Vizio states that in prosecution, PMC argued:

that Seth-Smith does not describe a code portion to be expanded and contracted, because the page number (i.e., the alleged code portion) is not both expanded and contracted at Seth-Smith’s transmitter station. With respect to Claims 52, 53, and 79, which expressly recited this limitation, the Examiner agreed, withdrawing the rejections to these Claims.

(Dkt. No. 196 Ex. G (May 28, 2013 Amendment) at 35; Ex. U (Feb. 28, 2013 Amendment) at 28.) Vizio contends that PMC’s construction, however, can broadly and ambiguously include two code portions, one of them “longer” and the other one “shorter.” Vizio contends that PMC’s construction recaptures subject matter it expressly relinquished.

Vizio further states that PMC’s infringement contentions include multiple distinct theories for “an expanded and a contracted code portion” such as “a larger number of” and “a smaller number of” TS packets for “a desired channel or program,” “larger[-sized]” and “smaller[-sized]” PES packets, “larger digital video containers” and “smaller digital video containers,” etc. (Dkt. No. 196 Ex. Q (’775 infringement contentions) at 41-43.) Vizio contends that this further supports finding the terms to be indefinite.

Samsung contends that during prosecution, PMC cited to Webster’s dictionary as noted above, but that each dictionary example shows the terms require a change (smaller to larger or larger to smaller). Samsung contends that PMC’s construction removes the concept of change altogether. Samsung further contends that its construction references “volume” as the embodiment providing support for the claims relates to the “volume” of a program. (Dkt. No. 78

at 13, n. 12 (citing '217 Patent 234:60-235:1).) At the oral hearing, Samsung stated that PMC's use of a term that connotes length was improper. Samsung stated that the use of "larger" or "smaller" gets closer to a proper construction. (Dkt. No. 237 at 87.)

Samsung states that the prosecution history further supports that the claims require expanding or contracting the code portion. Specifically, Samsung states that the applicants argued with regard to claim 2 that the prior art "fails to teach that the decoder expands or contracts the code portion based on the control signal." (Dkt. No. 78 Ex. J (10/09/2012 Amendment) at 33.) Samsung also cites to the statement: "the encoded page number does not serve as the basis for expanding or contracting a code portion of information transmissions." (Dkt. No. 78 Ex. K (02/28/2013 Amendment) at 27.) Samsung further cites to the prosecution statement: "the code portion is not both expanded and contracted at Seth-Smith's transmitter station." (*Id.* at 28.) Samsung contends that PMC thus made binding admissions in prosecution and that the terms should not be broadened to capture mere "longer" or "shorter" code portions. Samsung further points to '217 Patent 235:13-67 as indicating that size of the code portion is enlarged by employing an "expand-to-full-search" to enlarge the volume of the video transmission that is searched for the code portion. (Dkt. No. 78 at 14, n.13 (citing '217 Patent 235:13-67).)

Analysis

The claims describe a decoder that is capable of decoding both "an expanded and a contracted code portion" of transmissions (claims 2 and 11). This corresponds to the specification describing "to commence detecting digital information in every frame of its received video information" and "to commence detecting digital information in the normal transmission location of every frame of its received video information." '217 Patent 236:29-44,

236:60-67, 237:23-30. Though Vizio objects that the term “code portion” is not utilized, it is clear that larger and smaller portions of the transmission are utilized. This also conforms to the prosecution history and its discussion of the ordinary dictionary meaning. (Dkt. No. 69 Ex. 17 (July 22, 1997 Amendment) at 26.) Though Vizio contends that it is unclear what is “expanded” or “contracted,” the term itself and the construction of “code portion” above (a part of an instruction set) provide guidance. The relevant instruction sets are a larger instruction set or a smaller instruction set.

As to Samsung’s construction, such construction does not conform to the surrounding claim language as described above. For example in claim 2, “the decoder is capable of decoding and transferring, based the control signal, an expanded and a contracted code portion information transmissions.” This does not conform to Samsung’s concept that a particular code portion is changing. Rather, what is decoded and transferred is an expanded or contracted portion. This also conforms to dependent claim 6: “producing all of at least one video image based on decoded data during a time when one of an expanded code portion and a contracted code portion information transmission is decoded and transferred.” In context of the claims and the specification, PMC’s view of the term is proper. At the oral hearing, it was argued that PMC’s use of “longer” and “shorter” limit the term to a context in that only the length of the code portion was issue. As noted, the specification and claims include reference to “volume” of a code portion. In this context the code portion need not just be longer (or shorter) but could more generally be larger (or smaller).

The Court construes “an expanded [and contracted] code portion” to mean “larger [and smaller] code portion.”

11. portion receiver ('775 Patent claim 11)

PMC	Vizio & Samsung Defendants
Device or component that receives a digitally encoded portion of a larger information transmission.	Device that searches for a code portion in a normally visible portion and a normally non-visible portion of each frame of an information transmission.

The dispute centers on whether the meaning of the term was disclaimed in prosecution.

Positions of the Parties

PMC points to the claim language for support: “[a] method of processing signals at a receiver station having a portion receiver,” “receiving the code portion of said information transmission,” and “controlling the portion receiver, based on the control signal, to receive and transfer an expanded and a contracted code portion information transmission . . .”

Vizio and Samsung both state that in prosecution, “portion receiver” was characterized as:

As explained at pages 457-458, applicants’ portion receiver operates normally in one of several operating modes -- a “normal” search mode in which received processor data (digital data) is searched for only within the normal transmission locations of each frame of received video information, and an “expanded” search mode in which received processor data (digital data) is searched for from the first detectable portion of each frame to the last detectable portion of each frame. Moreover, applicants’ invention further contemplates searching for received processor data “outside” of the capacity of a conventional transmission (e.g., in a side lobe of a transmission, as disclosed at page 463).

(Dkt. No. 78 Ex. L (USP 7,884,995 3/23/1998 Amendment) at 25.)⁸ Vizio contends that PMC ignores these characteristics. Vizio contends that its construction conforms to the specification also: “[i]n television, the normal transmission location of the preferred embodiment is in the vertical interval of each frame of the television video transmission. . . . [T]he vertical interval . . .

⁸ Vizio contends that claims of the application which lead to USP 7,884,995 were originally pending in that application but then moved to the '775 Patent, including the '775 Patent claims asserted against Vizio. (Dkt. No. 196 at 14, n.9.)

is not visible on a normally tuned television set.” ’217 Patent 44:18-24. Vizio contends that PMC’s construction merely requires the receiver be capable of receiving a digital portion, which reads on prior art receivers and disregards the prosecution.

Samsung points to the prosecution statement cited above and contends that this prosecution history is consistent with the specification which confirms the portion receiver searches in normally visible and non-visible portions. ’217 Patent 235:53-236:67.

In reply, PMC contends that the then pending claim that was relevant to the prosecution statement at issue contained the “searched” language, unlike the present claim. Specifically, PMC contends the then pending claim language was (1) “a portion receiver for receiving at least some of a television signal;” (2) “a controller for controlling said portion receiver;” and (3) “controlling said portion receiver to one of increase and decrease the size of said selected portion by varying the amount of said received television signal which is actually searched for data” (Dkt. No. 78 Ex. L (USP 7,884,995 3/23/1998 Amendment) at 2.) PMC contends that, thus, the applicant distinguished the prior art on the “search” concept because the claim in question contained “searched.” PMC contends that nothing in the file history requires a “portion receiver” in the asserted claims to search for anything. PMC contends that the only other position of Defendants is an argument to limit the claim to a disclosed embodiment. (Dkt. No. 83 at 8.)

The parties did not argue this term at the oral hearing.

Analysis

The claim calls out “receiving the code portion of said information transmission,” and “controlling the portion receiver, based on the control signal, to receive and transfer an expanded and a contracted code portion information transmission.” In context of the claim language itself, PMC’s construction is more appropriate. As to Defendants arguments that the prosecution

history limits the method of how the portion receiver is operated, the prosecution history statements merely describe the embodiment disclosed in the specification. When read in full context, these statements are not limiting the term “portion receiver” to a particular search algorithm. Moreover, Defendants’ prosecution arguments are further weakened as the prosecution claim in question included “search” language, but the issued claim in question does not, rather it merely references controlling “to receive and transfer an expanded and a contracted code portion information transmission.”

The Court construes “portion receiver” to mean “device or component that receives the code portion.”

12. valve ('885 Patent claim 1)

PMC	Vizio Defendants	Samsung Defendants
A device or processor that regulates the flow of digital data.	A device that regulates the flow of signal processing information.	No construction necessary.

In the post briefing joint claim construction chart, Vizio changed its construction in a manner that more conforms with PMC’s construction. (Dkt. No. 212 at 4.) The primary difference remaining is PMC’s use of “digital data” and Vizio’s use of “signal processing information.” This remaining issue between PMC and Vizio was not addressed in the parties’ briefing and the bulk of the parties’ arguments in the briefing are no longer applicable. Samsung contends that PMC does not construe what a valve. Specifically, Samsung contends that PMC merely states the valve is a “device” and then describes its function. Samsung contends the claim clearly already describes the function: “performs at least one of the functions of ceasing to communicate and commencing to communicate said embedded signals to said one processor.”

Samsung contends that PMC seeks to avoid this language as PMC's infringement contentions identify a demultiplexer as the "valve," even though demultiplexers merely parse the information, they do not start and stop the data flow. (Dkt. No. 78 at 16-17, n.15.) Samsung contends that a jury will understand the term's meaning without construction in the context of the functional language provided in the claim itself.

The parties did not argue this term at the oral hearing.

Analysis

The basic functionality, as described in the specification, for a valve relates to commencing and ceasing the communication. '217 Patent 51:61-63, 37:21-25, 38:24-39:5, 55:17-18, 90:46-50. This conforms to the surrounding claim language which states: "said valve performs at least one of the functions of ceasing to communicate and commencing to communicate said embedded signals to said one processor." The specification and the claim do not exclude other functionality, however at least one of the functions as claimed is required. All of the parties are in agreement that "valve" is not used in an ordinary mechanical context meaning. As such, the Court finds it would be beneficial to provide a construction to the jury to clarify the term. Vizio's use of "signals" is more true to the claim which requires control of the communication of "embedded signals" by the valve.

The Court construes "valve" to mean "a device that regulates the flow of signals."

13. valve control signal[s] ('885 Patent claim 1)

PMC	Vizio Defendants	Samsung Defendants
This term does not require construction beyond its plain and ordinary meaning. To the extent a construction is necessary, PMC proposes:	Signals that control the operation of a valve, but not merely channel control words	Signals that control the operation of a valve.

Control signals that affect, control, or enable, a valve.		
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The primary disputes relate to PMC’s use of “affect” and “enable” and Vizio’s inclusion of a negative limitation.

Positions of the Parties

PMC notes that the parties in Phase 1, including Vizio, agreed no construction was necessary for “control signal.” PMC notes that the Court in *PMC v. Motorola, Inc.* and *PMC v. Zynga* declined to construe control signal.

Vizio contends that “valve control signal” is a different term than “control signal,” and that “valve control signal” was distinguished in prosecution. Vizio contends that during prosecution, PMC argued that “the channel control word 200 and its constituent codes” in the Campbell reference “fail[ed] to anticipate the claimed valve control signals.” (Dkt. 196 Ex. J (’644 application, July 21, 1997 Amendment) at 15.) Vizio further points to PMC’s statement that in Campbell, “[t]he channel control word 200 defines codes that are required for access to each television program being transmitted,” and “the channel control word 200 and its constituent codes” perform a long list of functions, such as “defin[ing] the level of access required for the television program in question,” and “provid[ing] the converter with the code necessary to operate the video descrambler unit 116.” (*Id.*) Vizio contends that PMC then argued that the valve control signals were different from all such codes. Vizio contends that, thus, PMC excluded the channel control word and its constituent codes from “valve control signal[s].” Vizio contends that PMC’s construction would encompass channel control words.

Samsung objects to PMC’s inclusion of “affect” or “enable” a valve. Samsung contends that PMC is adding two additional capabilities that have nothing to do with the plain meaning of

“control.” Samsung contends that PMC’s construction is inconsistent with PMC’s point of distinction with regard to the prior memory in that the memory communicated information as part of its “innate functions of the memory 130 that do not require that the memory 130 be controlled.” (*Id.* at 13-14.)

PMC contends that inclusion of Vizio’s “as opposed to channel control words” would confuse the jury. PMC further contends that this limitation is not necessary because in prosecution, it was found that valve control signals are not anticipated by “channel control words.” (Dkt. No. 83 at 10.)

The parties did not argue this term at the oral hearing.

Analysis

PMC has not provided support for expanding “control” to also include “affect” and “enable.” Absent evidence from the intrinsic record, the Court declines to make such change as those terms extend beyond the ordinary meaning of “control.”⁹ As to “channel control words,” the parties are in agreement that channel control words are not valve control signals. (Dkt. No. 83 at 10.) This also conforms to the file history. As there is no disagreement on this issue, the Court finds that for jury clarity the phrase is not necessary.

The Court construes “valve control signal[s]” to mean “signals that control the operation of a valve.”

14. [a] control portion ('885 Patent claim 102)

PMC	Vizio & Samsung Defendants
This term does not require construction beyond its plain and ordinary meaning.	A portion that carries operating instructions.

⁹ For example, a power cord may affect or enable a desktop computer to work, but one would not construe the power cord as controlling the computer.

The primary dispute is whether operating instructions must be included in the portion.

Positions of the Parties

PMC objects to Defendants' use of "operating instructions." PMC contends that when operating instructions are required, the patentees used that term such as the use of "operating system instruction" in claim 28 and "operating instructions" in claim 77. PMC contends that the asserted claim only requires that the "control portion" be passed "to a programmable processor to cause programming." PMC contends that, thus, the control portion could be a digital signal that causes programming to be loaded, rather than being operating instructions. (Dkt. No. 69 at 23.) To the extent Defendants cite to an amendment in the '217 Patent prosecution, PMC contends that the claim in question stated "said at least a control portion of said instruction module to be transferred to memory at a subscriber station and executed upon command." (Dkt. No. 69 Ex. 14 (Oct. 4, 1999 Amendment) at 21.) PMC contends that, here, the claim does not require the "control portion" to be part of an "instruction module."

Samsung contends that PMC intends to argue that "control" captures other things such as "affecting" and enabling" as PMC argued for "valve control signal" and "control signal." Samsung contends that claim 102 differentiates between a "control portion" and the more general "first" and "second" "portions" of "digital data" recited in the claims. Samsung further contends that the specification teaches that the control over the receiver station is via operating instructions. (Dkt. No. 78 at 21 (citing '217 Patent 14:6-13).)

The parties did not argue this term at the oral hearing.

Analysis

Samsung has not pointed to evidence for limiting the term to instructions. Samsung's identification of a mere embodiment in the specification only points to an embodiment and

Samsung has not pointed to anything limiting the term. *See Arlington*, 632 F.3d at 1254. Further, as noted by PMC some claims explicitly recite instructions and some do not, further counseling against Samsung's limitations. *See Phillips*, 415 F.3d at 1314. As to Samsung's arguments regarding the "control signal" disputes, the Court notes just as in those terms, "control portion" requires the control concept, not merely affecting or enabling.

The Court finds that "[a] control portion" has its plain and ordinary meaning.

15. among said plurality of programmable processors ('885 Patent claim 102)

PMC	Vizio Defendants	Samsung Defendants
Between some or all of the programmable processors.	Through each of the plurality of programmable processors in the receiver station.	Among each of the plurality of programmable processors in the receiver station.

The parties dispute whether the passing function is among "some or all" (PMC) verse "each" (Defendants) of the processors.

Positions of the Parties

PMC acknowledges that in one 2014 prosecution response, the applicants referred to "passing at least a portion of said digital data to each of said plurality of programmable processors." (Dkt. No. 69 Ex. 15 at 49.) PMC contends that this was merely a "cut and paste" error, because in an earlier 2013 office action response the applicants had discussed the same prior art (Yanagimachi) reference and used the same language, however, in that 2013 response the claim at issue used the word "each." (Dkt No. 69 at 24 (citing Dkt. 69 Ex. 16 at 52).) PMC contends that the applicants mistakenly copied the office action response language. PMC contends that the two claims in question (then claims 123 and 158) cannot reasonably be considered to be equivalent in this regard because one used "each" and one did not. PMC contends that this alone indicates that the 2014 office action was not a "clear and unambiguous"

disavowal. PMC notes that while issued '885 Patent claims 109 and 110 use "each," the failure to use "each" in claim 102 indicates that "each" was not intended in claim 102.

Further, PMC contends that "each" was not the point of distinction made over Yanagimachi, but rather, the point of distinction was whether Yanagimachi disclosed "programmable" processors. PMC contends that accordingly, the way to reconcile the prosecution history was that the discussion of "each" with respect to claim 158 was "a throwaway" and not a clear unequivocal disavowal. (Dkt. No. 83 at 11.)

Vizio contends that twice PMC argued that the prior art failed to teach "passing at least a portion said digital data to each of said plurality of programmable processors." (Dkt. No. 196 Ex. L (Jan. 15, 2014 Amendment) at 49; Dkt. No. 196 Ex. M (July 8, 2013 Amendment) at 52.) Vizio contends that whether or not the applicants made a "cut and paste" error is irrelevant under the law. Vizio contends that the Federal Circuit has repeatedly relied on the public notice functions of prosecution histories and "requires that a patentee be held to what he declares during the prosecution of his patent." *Springs Window Fashions LP v. Novo Indus., L.P.*, 323 F.3d 989, 995 (Fed. Cir. 2003) ("If the applicant mistakenly disclaimed coverage of the claimed invention, then the applicant should have amended the file to reflect the error, as the applicant is the party in the best position to do so.").

Samsung similarly states that PMC acknowledges that the applicants distinguished Yanagimachi in 2013 based on "each" and used the same distinction in 2014. Samsung contends that this was not merely a cut and paste error because a side by side comparison of the two amendments indicates that the paragraphs in question were changed significantly:

July 2013 Response PMC Br., Ex. 16 at 52	January 2014 Response PMC Br., Ex. 15 at 49
Applicants respectfully submit that Yanagimachi fails to teach a plurality of programmable processor or a programmable control processor, as claimed in claims 123, 128 and 158-170. For instance, the reference fails to teach Claim 123's steps of passing at least a portion of said digital data to <u>each</u> of said plurality of programmable processors, passing a control portion of said digital data to a programmable control processor, processing said passed at least a portion of said digital data and outputting processing information at each of said plurality of programmable processors and controlling the passing of said processed information from at least one of said plurality of programmable processors in response to said passed control portion. Similar limitations directed to the operations of the plurality of programmable processors and a programmable control processors are positively claimed in claims 124-128 and 158-170 and are also not taught by Yanagimachi.	Applicants respectfully submit that Yanagimachi fails to teach a plurality of programmable processor or a programmable control processor, as claimed in claims 158 and 162-164. For instance, the reference fails to teach Claim 158's steps of passing at least a portion of said digital data to <u>each</u> of said plurality of programmable processors, controlling the passing of a second portion of said digital data among said plurality of programmable processors, and outputting viewable or audible information based on the step of controlling.

(Dkt. No. 78 at 22-23.) Further, Samsung notes that the January 2014 response also distinguished then claim 158 a second time on the same basis in the next paragraph: “Nor, does the reference teach the processing of the passed at least a portion of digital data or stream of digital data (or data message) and/or outputting processing information at each of said plurality of programmable processors, as claimed in claims 158, and 162-164.” (Dkt. No. 69 Ex. 15 at 49.)

The parties did not argue this term at the oral hearing.

Analysis

As drafted, the plain claim language could arguably take on one of two meanings: “some or all” or “each.” Each party points to the intrinsic record as support for their position. Though claim language varying among terms is indicative of the differing meanings, it is not an absolute rule. *See Marine Polymer Tech., Inc. v. HemCon, Inc.*, 672 F.3d 1350, 1359 (Fed. Cir. 2012)

(claim differentiation cannot “overcome...a contrary construction dictated by the written description or prosecution history.”). Here, the applicants twice prescribed in prosecution a meaning to “among” as used in the asserted claim. That such meaning was “mistakenly” made is not clear in the record. The applicants’ statements, however, do clearly reference “among” in the context of “each” processor with regard to the asserted claim.

The Court construes “among said plurality of programmable processors” to mean “among each of the plurality of programmable processors.”

16. command[s] ('650 Patent claims 1 and 18)

PMC	Vizio & Samsung Defendants
Signal that causes performance of a function.	An instance of signal information that is addressed to a particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions, and that always includes at least a header and an execution segment.

The parties dispute whether a paragraph in the specification is definitional and whether elsewhere the specification contradicts that paragraph.

Positions of the Parties

PMC contends that Defendants’ construction reads out preferred embodiments disclosed in the specification. Specifically, PMC contends the specification discloses the “pseudo command” and the “meter command” are commands that are “addressed to no apparatus” and “do[] not instruct [any] processors . . . to perform any controlled functions.” '217 Patent 25:33-38. PMC states that although “[t]hese commands are always transmitted with meter-monitor segment data” there is no mention of a header or an execution segment that must also be part of the transmission. PMC further contends that these commands allow “gathering ratings on conventional programming transmissions . . . without causing . . . controlled functions at

inappropriate times” and “apparatus . . . to transmit meter information to buffer/comparator, 14, without performing any controlled function.” *Id.* at 25:33-54. PMC contends that these embodiments are excluded by Defendants’ inclusion of “addressed to a particular subscriber station apparatus” and “always includes at least a header and an execution segment.” (Dkt. No. 69 at 27.)

PMC further notes that the claims already provide details as to the commands: to be directed at either “said control processor” (claim 1) or “said plurality of processors (claim 18). PMC contends that Defendants’ inclusion of a “subscriber station” adds a term not in the claim. PMC further contends that both asserted claims also disclose as one of the limitations that “a plurality of” or “at least one” “command[s] in [a/said] message stream” are input to one or more apparatus. PMC contends that, at least with respect to the claim language at issue, details such as “at least a header and an execution segment” are irrelevant given the disclosure of “command[s] in [a/said] message stream” and therefore should be excluded from construction to save the jury from unnecessary confusion.

PMC contends that its construction leaves out unnecessary details regarding what apparatus commands are addressed to, and it does not read out embodiments. PMC states that the asserted claims in which “command” appears already set forth what apparatus commands are directed to, and it would be redundant to include in the construction that commands are “addressed to a particular subscriber station apparatus.” PMC states that Defendants’ construction also excludes an embodiment—“pseudo commands,” which are “addressed to no apparatus.” ’217 Patent 25:34-35. As to “meter commands,” PMC states that the specification discloses that “[t]he meter command causes apparatus such as controller, 12, of FIG. 2D to transmit meter information to buffer/comparator, 14, without performing any controlled

function.” *Id.* at 25:51-54. PMC, thus, contends that meter commands still cause performance of a function (i.e., transmitting meter information to the buffer/comparator), but in that specific embodiment it does not perform a “controlled function.” (Dkt. No. 83 at 12.)

Vizio and Samsung contend that their construction comes directly from the definition provided in the specification:

A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a header and an execution segment.

’217 Patent 23:34-38. Vizio states that PMC’s construction relies on a single paragraph that appears to disclose embodiments which conflict with the explicit definition of “command.” (Dkt. No. 196 at 19.) Vizio states that the specification discloses “pseudo commands” and “meter commands,” which are “addressed to no apparatus” and “do[] not instruct processors . . . to perform any controlled functions.” ’217 Patent 25:33-38. Vizio states that the applicant “cannot rely on its own use of inconsistent and confusing language in the specification to support a broad claim construction which is otherwise foreclosed.” *Trustees of Columbia Univ. v. Symantec Corp.*, 811 F.3d 1359 (Fed. Cir. 2016). Vizio contends that PMC’s own construction conflicts with the disclosed “meter commands,” because meter commands do not cause performance of any controlled functions.

Analysis

The specification contains two relevant paragraphs. The first states:

A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a header and an execution segment. With respect to any given command, its execution segment contains information that specifies the apparatus that said command addresses and specifies a particular function or functions that said command causes said

apparatus to perform. (Hereinafter, functions that execution segment information causes subscriber station apparatus to perform are called "controlled functions.")

'217 Patent 23:34-43. This passage is found in a section entitled "The Composition of Signal Information...Commands, Information Segments and Padding Bits." The first two paragraphs describe signals. The third paragraph is listed above and provides a definitional statement as to commands. Then specification states in column 25:

The preferred embodiment includes one appropriate command (hereinafter called the "pseudo command") that is addressed to no apparatus and one command that is addressed to URS signal processors, 200, (hereinafter, the "meter command") but does not instruct said processors, 200, to perform any controlled function. These commands are always transmitted with meter-monitor segment data that receiver station apparatus automatically process and record. By transmitting pseudo command and meter command signals, transmission stations cause receiver station apparatus to record meter-monitor segment information without executing controlled functions. The pseudo command enables a so-called ratings service to use the same system for gathering ratings on conventional programming transmissions that it uses for combined media without causing combined media apparatus to execute controlled functions at inappropriate times (e.g., combine overlays onto displays of conventional television programming). The meter command causes apparatus such as controller, 12, of FIG. 2D to transmit meter information to buffer/comparator, 14, without performing any controlled function.

Id. at 25:33-53.

The Court finds that in the overall context of the specification, the first passage cited above is definitional in nature. At the oral hearing, PMC acknowledged to the Court that there was no portion of the specification in which a command is described as not having a header/execution section. (*See* Dkt. No. 237 at 26-27.) Thus, neither the column 25 passage cited by PMC nor elsewhere in the specification is the statement that "[a] command is always constituted of at least a header and an execution segment" ('217 Patent 23:37-38) contradicted. The specification is clear as to this point.

The remaining dispute centers on whether a command must be “addressed to a particular subscriber station apparatus.” As to the addressing concept, PMC acknowledged that the specification teaches that only pseudo commands fail to be addressed. The specification provides an explicit statement in a definitional description section of the patent that states “[a] command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.” ’217 Patent 23:34-37. The specification is equally clear that the one exception to this rule is specifically labeled differently, a “pseudo command:” “one appropriate command (hereinafter called the “pseudo command”) that is addressed to no apparatus.” *Id.* at 25:33-35. The claims in question recite a “command” not a “pseudo command.” Moreover, the context of the claim usage conforms with a command as opposed to a pseudo command, because in the claims the commands are provided to a particular processor: in claim 1 the commands are explicitly input to the control processor and in claim 18 they are provided to “said first of said plurality of processors.”

The Court construes “command[s]” to mean “an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a header and an execution segment.”

17. explains [a/said] significance ('217 Patent claims 1, 4, 30, and 38)

PMC	Vizio & Samsung Defendants
This term does not require construction beyond its plain and ordinary meaning.	Indefinite

The parties dispute whether how an “explanation” is made and what level of “significance” is required to be disclosed.

Positions of the Parties

PMC contends that the surrounding claim language of claim 1 states “outputting and displaying said multimedia presentation to a user at said receiver station based on said step of coordinating such that said presentation using said information has a predetermined relationship to said content of said medium . . . and said content of said medium . . . explains a significance of said presentation using said information.” PMC contends that the specification discloses this limitation:

...TV monitor, 202M, displays the conventional television image and the sound of the transmitted "Wall Street Week" program. During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. FIG. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M. Then the host says, "And here is what your portfolio did." . . . TV monitor, 202M, then displays the image shown in FIG. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences waiting for another instruction from decoder, 203.

By itself, the meaning of FIG. 1A is hardly clear. But when FIG. 1A is combined and displayed at the proper time with the conventional television information, its meaning becomes readily apparent. Simultaneously, each subscriber in a large audience of subscribers sees his own specific performance information as it relates to the performance information of the market as a whole.

'217 Patent 13:63-14:27. PMC contends that this means that the graphic of the subscriber's own portfolio performance has a “predetermined relationship” with the audio and video content of the “Wall Street Week” program, and the conventional television information in “Wall Street Week” “explains a significance” of the subscriber's graphic. PMC contends that this was also described in prosecution when the applicants proposed to amend then claim 7 “to set forth that content of the second medium explains a significance of content of the first portion of the multimedia presentation,” and stated that (1) the “disclosed WSW television programming is a second

medium,” (2) the “graphic overlay of a viewer’s stock portfolio performance is a first portion of the multimedia presentation,” and (3) “[c]ontent of the WSW television programming, i.e., the host saying ‘and here is what your portfolio did,’ explains the significance of the content of the graphic overlay.” (Dkt. No. 69 Ex. 20 (February 4, 2002 Response) at 30.) PMC notes that the applicants explained that “[i]n other words, the content of the second medium that is output in coordinated fashion with the first medium includes some explanation or evaluation of the meaning or importance of the content of the first medium.” (*Id.* at 113.)

Vizio contends that the ’217 Patent’s claims and specification lack any frame of reference as to how an “explanation” is made and what level of “significance” is required, making the term subjective. As to PMC’s Wall Street Week example, Vizio contends that PMC’s assertions (that the embodiment in which a TV host states, “Here is what your portfolio did today,” explains the significance of a subscriber’s personal stock portfolio graphic when it is overlaid on top of a stock market graphic) is not correct. Vizio contends that the example does not use the term “explains a significance,” does not define this term, and does not describe what in the receiver station is used to create the explanation. Vizio contends that, thus, the example fails to cure the uncertainty of this term. (Dkt. No. 196 at 20.)

Vizio further contends that the claim language has other ambiguities. Specifically, Vizio points to claim 30 requiring that the “content of said second medium” (e.g., a broadcast television program) comes from an external source and is not within the control of the claimed “multimedia presentation apparatus.” Vizio contends that infringement of this term depends entirely on the content of the medium and has no relation to the claimed receiver station’s ability to create a multimedia presentation according to the claim. Vizio points to *Ex parte Brummer* as supporting Vizio’s indefiniteness position. *Ex parte Brummer*, 12 U.S.P.Q.2d (BNA) 1653, 1655

(1989) (finding a claim reciting a bicycle with dimensions defined by the rider's height and weight indefinite because "the same bicycle might fall within this language of claim 9 when ridden by a rider of one combination of weight and build, but not when ridden by a rider of another"). Vizio contends that this would result in a system displaying a car commercial to infringe when the narrator "explains" the significant features of the car (whatever they may be), but not infringe if the commercial merely shows a car and plays music. Vizio contends that this example is not an abstract hypothetical: PMC contends Vizio infringes because the audio of a standard television program explains the significance of the video of the same standard television program, regardless of what the television program is or how the television is operated. (Dkt. No. 196 Ex. R ('217 infringement contentions) at 114.)

Vizio further points to the prosecution history in which PMC argued, during prosecution, that the prior art's "teletext character translation is provided to explain the meaning of the second language sub-audio," referring to subtitles translating foreign language audio. (Dkt. 196 Ex. S (Feb. 4, 2002 Amendment) at 131.) Vizio contends that a translation does not, however, explain the significance of the audio as it is simply a translation. Vizio contends that if the viewer is fluent in the audio's language but not the teletext language, then the translation is of no significance to the viewer because the viewer already understands the audio but does not understand the sub-titles. (Dkt. No. 196 at 20.)

Samsung states that none of the specification excerpts cited by PMC disclose how the underlying programming explains the significance of the overlay. Samsung contends that in the Wall Street Week example, when the host says "and here is what your portfolio did," it is unclear how this explains the significance of the stock portfolio performance. Samsung states that, more importantly, the specification is silent on what "significance" means as the term is never used in

the 1981 Specification on which PMC relies. Samsung contends that the word “significance,” in this context, is ambiguous and lacks reasonable certainty and is, therefore, indefinite.

In reply, PMC states that, in prosecution, the applicants argued on appeal to the BPAI that it “is the substance, gist, meaning or significance of the second medium that must explain the significance of the presentation,” and that a “structural portion of television signal, such as synchronization pulse, cannot explain the significance of a presentation.”(Dkt. No. 83 Ex. 1 (Mar. 27, 2006 Reply Br.) at 14.) The BPAI reversed the Examiner’s rejection, finding that the prior art reference failed to disclose that “said content of said second medium explains a significance of said presentation using said information . . .” (Dkt. No. 69 Ex. 8 (Jan. 13, 2009 BPAI Decision) at 69-70.) PMC further states that Defendants’ argument also ignores that the specification sets forth a clear example in the Wall Street Week embodiment regarding what “explains a significance” means. As to Vizio’s argument that Claim 30 is indefinite because the “content of said second medium” comes from an external source over which the claimed apparatus has no control, PMC states that claim 30 recites that the “microcomputer” of the claimed “multimedia presentation apparatus” must “determine[] content of each received medium received” and “coordinate[] a presentation . . . based on said microcomputer determining content of said second medium by processing an identifier which identifies said content . . .” ’217 Patent claim 30.

At the oral hearing, the Defendants emphasized a file history discussion of the Baker reference in which Defendants contend a television signal of a picture of a bank (such as a logo) explains the significance of data data (such as an account balance). (Dkt. No. 237 at 102-103, 105-106.) Defendants contend that the logo explained a significance of the account balance, yet this example was argued in prosecution to not explain the significance of the bank data. (*Id.*) At

the hearing, PMC contended that the bank logo provided no explanation as to the account balance. (*Id.* at 107-108.)

Analysis

Defendants have not established that a person of skill in the art could not determine with reasonable certainty the scope of the term, particularly in light of the intrinsic evidence. *See Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2129–30. The claim language describes “explains a significance of said presentation using said information.” Though Defendants argue otherwise, the Court finds that the Wall Street Week example in the specification helps provide reasonable certainty by illustrating an example of such explanation of the significance of the presentation. ’217 Patent 13:63-14:27. Note, the “host says, ‘And here is what your portfolio did.’” *Id.* at 14:6. Further, “[b]y itself, the meaning of FIG. 1A is hardly clear. But when FIG. 1A is combined and displayed at the proper time with the conventional television information, its meaning becomes readily apparent.” *Id.* Together this disclosure provides support and certainty to the claim limitation. The BPAI also found the language understandable. (Dkt. No. 69 Ex. 8 (Jan. 13, 2009 BPAI Decision) at 69-70.) Elsewhere, the prosecution history also makes the language clear. (Dkt. No. 69 Ex. 20 (February 4, 2002 Response) at 30.) As to Defendants’ dispute regarding the Baker reference, Defendants have not shown how the bank logo explains a significance of the bank balance such that any uncertainty is interjected into the term “explains a significance of.”

The Court finds that the term "explains [a/said] significance" has its plain and ordinary meaning.

18. instruct signals ('6,649 Patent claim 9)

PMC	Vizio & Samsung Defendants
This term does not require construction beyond its plain and ordinary meaning. If required, To the extent a construction is necessary, PMC proposes: Signals carrying information used by the receiver station to invoke an operation.	A signal including an instruction or series of instructions as opposed to identifiers used for comparison purposes.

The parties dispute whether the term is limited to “instructions.”

Positions of the Parties

PMC notes that this Court, in the *Echostar* Markman Order, found that because the “explicit claim language defin[ed] the function of the instruct signal,” the term required no additional construction. (Dkt. No. 69 Ex. 11 at 34.) PMC also points to this Court’s statement in the *Zynga* case which also found that the term “require[s] no construction” after analyzing the claim language. (Dkt. No. 69 Ex. 12 at 26.) Finally, PMC contends the Special Master appointed in the *PMC v. Scientific-Atlanta, Inc.* case explained, “‘an instruct signal’ is simply a signal” and that “[t]he function of that signal is expressly set forth in the claim.” (Dkt. 69 at 31.)

If construction is needed, PMC points to the language of claim 9 “one or more instruct signals . . . enable the receiver station to receive and identify [the] variable formats [of the] plurality of discrete signals [which] deliver[] at least a portion of television programming.” PMC also points to the specification: instruct signals contain “information that may include addresses of specific receiver apparatus controlled by the signals and instructions that identify particular functions the signals cause addressed apparatus to perform.” '217 Patent 7:59-63.

Vizio contends that the prior Courts did not consider the '6,649 Patent prosecution history as that patent was not asserted in the prior cases. Vizio contends that during prosecution, PMC argued that “address codes,” in a prior art reference, did not anticipate the claimed “instruct

signals” because the “address codes” “merely identify the page and row as being transmitted in any given field ... These address codes do not instruct anything.... The address codes are compared and when matches occur, the character codes are entered into storage, the address codes do not instruct anything to occur, they are used for comparison purposes only.” (Dkt. No. 196 Ex. C (Feb. 17, 1998 Amendment) at 70.) Vizio contends that its construction accounts for these statements.

Samsung also contends that PMC attempts to change “instruct” to mean “information used by the receiver station.” Samsung contends that the specification quote provided by PMC is not relevant as it is from the 1987 specification whereas PMC is claiming priority to the 1981 specification. Further, Samsung contends that PMC fails to make clear that the quoted portion of the specification relates to “embedded signals,” and that it is the embedded signals that contain digital information and instructions. ’217 Patent 7:59-63.

In reply, PMC contends that contrary to Defendants’ assertions, PMC’s construction does not read on “identifiers for comparison purposes” as recited in the file history because PMC’s construction requires that “an operation” be “invoked” by the “receiver station.” PMC contends that during prosecution, PMC argued the prior art’s “address codes” are not “effective at the receiver station to implement a television signaling scheme” which defines the programming and information content in said variable formats (including varying locations, timing, lengths, and encryption schemes). (*See* Dkt. No. 196 Ex. C (Feb. 17, 1998 Amendment) at 71.) PMC contends its construction is not antithetical to those statements, nor are the statements a clear disavowal. (Dkt. No. 83 at 13.)

The parties did not argue this term at the oral hearing.

Analysis

The prosecution history cited by Defendants does not equate “instruct signals” with “instructions.” The statements merely distinguished address data, but did not limit the signals to instructions. The statements emphasized that address data does not instruct. (Dkt. No. 196 Ex. C (Feb. 17, 1998 Amendment) at 70.) As noted by Samsung, PMC’s construction could be interpreted to remove the “instruct” concept and merely encompass any data used by the receiver station. Such a view of PMC’s construction does not appear to give full weight to the requirement that the information is used “to invoke an operation.” To avoid such potential confusion, the Court modifies PMC’s construction. “Instruct signals” are “signals carrying information that instructs an operation to be invoked.”

The Court construes “instruct signals” to mean “signals carrying information that instructs an operation to be invoked.”

19. ...standard... ('2,649 Patent claims 88 and 90)

PMC	Vizio & Samsung Defendants
This term does not require construction beyond its plain and ordinary meaning.	Indefinite

Vizio contends the term could mean a “standard” such as a standard promulgated by a standards organization or a “standard” such as a reference that is used for comparison purposes. Samsung contends that “standard,” as used in the specification, references unifying operations across multiple platforms but that this is not the use in the claims as the claims reference a standard identifying a signal to be processed.

Positions of the Parties

PMC points to the surrounding claim language: “method of claim 1, wherein a standard informs said receiver station of a signal to be processed, said method further comprising the step of evaluating at least some of said selected at least one message based on said standard.” PMC contends that the specification states an “objective of the unified system of programming communication of the present invention is standardization of receiver station operating systems,” and that with “standardization, any given transmission station such as the program originating studio of example #10 can assemble and take control of a computer system of the computers of selected subscriber stations in the fashion described above in example #7 without any need to preprogram system software at any apparatus of said selected subscriber stations.” ’217 Patent 266:7-15. PMC also points to the examples of “EOFS Standard Word Location” and “EOFS Standard Length Location.” *Id.* at 272:11-15. PMC contends that even Vizio’s expert agrees that one “of ordinary skill in the art would understand a ‘standard’ to be a specification comprising a set of normative requirements” and that “standards may be developed by a standards developing organization (‘SDO’), a consortium, a single company, or other entity, and may be proprietary or publicly known (i.e., open).” (Dkt. No. 83 at 14 (quoting Dkt. No. 196-23 (Reader Decl.) at ¶186).)

Vizio contends that the evidence cited by PMC uses “standard” in two distinct ways: (1) the idea of “standardization” or use of standards, and (2) two registers (EOFS Standard Word Location and Standard Length Location) which hold reference values for comparison purposes. Vizio contends that if “standard” has the first meaning, the claim is indefinite because it is not clear if the standard is a standard promulgated by an industry organization or one of the Defendants’ own internal standards. (Dkt. No. 196 at 22.) Vizio contends that any transmission

must operate according to some defined standard to work, and thus, “standard” does not provide any bounds if the term carries a broad meaning. As to the EOFS registers, Vizio contends that the term “standard” is not used in the claims in the same manner that the word is used with regard to the registers.

Samsung contends that “standardization” referenced in the specification has nothing to do with the use of “standard” in the claims. Samsung contends that “standardization,” as used in the specification, is in relation to unifying operating systems across platforms, not the “standard” that identifies a signal to be processed as recited in the claims. (Dkt. No. 78 at 25.) As to the EOFS citations, Samsung contends that “standard” is used as the proper name for a particular memory location, not the “standard” recited in the claims. Samsung further contends that, though known now, the specification provides no reference to digital television standards.

The parties did not argue this term at the oral hearing.

Analysis

As to Vizio’s contention that “standard” could have two meanings (a first meaning that relates to standards such as an industry or internal company standard and a second meaning that relates to being a reference value), Vizio has not identified any teaching in the intrinsic record that would support a conclusion that the second concept is being referenced. As noted by PMC, the specification states (1) an “objective of the unified system of programming communication of the present invention is standardization of receiver station operating systems,” and (2) that with “standardization, any given transmission station such as the program originating studio of example #10 can assemble and take control of a computer system of the computers of selected subscriber stations in the fashion described above in example #7 without any need to preprogram system software at any apparatus of said selected subscriber stations.” ’217 Patent 266:7-15.

Such a teaching conforms with Vizio's first understanding of a standard. Further, PMC also points to the examples of "EOFS Standard Word Location" and "EOFS Standard Length Location." *Id.* at 272:11-15. That a "standard" location is used also conforms with the first meaning attributed to Vizio. That the location is used for comparison purposes does not change that a standard (in the first sense) location is utilized. Further, Vizio contends that the term should limited to a particular type of standard (industry verse internal). However, whether an industry standard or an internal standard, Vizio has not shown that it would not be understandable to one of skill in the art as to the meaning of a "standard" as both are standards in that usage of the term.

As to Samsung's contention that "standard" is used as a name of a location, such a name only supports that it is a "standard" location (in the first sense). Having rejected the "second" potential construction of "standard," the Court finds that it would be beneficial to a jury to understand the term in accordance with the plain and ordinary meaning of the term in the first context attributed by Vizio. The Court notes that Vizio's expert provided a definition of such ordinary meaning with which PMC also agrees. (Dkt. No. 83 at 14; Dkt. No. 196-23 (Reader Decl.) at ¶186.) The Court finds that the intrinsic and extrinsic evidence does not conflict with such meaning in the proper context of the specification.

The Court finds that "...standard..." means "specification comprising a set of normative requirements."

20. Order of steps for '6,649 claim 9

PMC	Vizio & Samsung Defendants
The steps of claim 9 of the 6'649 patent need not be performed in the order disclosed.	"Programming" step is performed prior to the "inputting logic" step.

	<p>“Receiving one or more instruct signals step” is performed prior to the “inputting logic” step.</p> <p>“Inputting logic” step is performed prior to the “Receiving a plurality of discrete signals” step.</p>
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The parties dispute whether the steps of the claim must be performed in the order recited.

Positions of the Parties

PMC contends that ordinarily the claim limitations of a method claim need not be performed in a particular order. PMC contends that nothing in the claim requires an ordering. PMC states that Defendants may argue that because the “inputting logic” step refers to “said variable formats,” then the identity of the variable formats must be established in the preceding “programming” and “receiving” steps. PMC contends, however, that the claimed system could easily anticipate the various formats and instruct signals that might be encountered by the receiver station and could be anticipatorily provided with the necessary logic to process them. PMC further states that Defendants appear to assume that the receiver station could not “receive” signals of a particular variable format before it had been input with logic to receive and identify those signals. PMC states that though Defendants’ ordering of that particular step might be most efficient, it is not required by the claim. The receiver station, for example, could cache the signals until it later obtained the necessary logic to formally receive and identify them. (Dkt. No. 69 at 32.)

Defendants¹⁰ contend that the claim requires “programming” the system to process signals encoded in variable formats to allow for the identification of variable formats in the later recited “inputting logic” step, and thus, accordingly, the “programming” step must be performed

¹⁰ Vizio adopts Samsung’s arguments. (Dkt. No. 196 at 23.)

prior to the “inputting logic step.” Defendants further contend that “receiving one or more instruct signals” must take place before “inputting logic … in accordance with one or more instruct signals.” Finally, Defendants contend that before “receiving a plurality of discrete signals identified according to a particular format,” the inputting logic step must be completed because it “enable[s] said receiver station to receive … said variable formats.”

In reply, as to the programming step, PMC contends that nothing in the “programming” step mentions using the programming to “identify” variable formats, as Samsung suggests. PMC contends that Samsung does not respond to PMC’s argument that the system could receive signals of a particular format before obtaining their associated logic by temporarily storing those signals. PMC contends that because this possibility is feasible and is not foreclosed by the claim language, Defendants’ attempt to impose an ordering on claim 9 is improper.

The parties did not argue this term at the oral hearing.

Analysis

Ordinarily, a method claim is not construed to require that its constituent steps be performed in a particular order unless the claim recites an order. *Interactive Gift Express, Inc. v. Compuserve Inc.*, 256 F.3d 1323, 1342 (Fed. Cir. 2001). A method claim that does not recite an order may nonetheless be construed to require that the claim’s steps be performed in a particular order if (1) the claim language, “as a matter of logic or grammar” requires that the steps be performed in a particular order, or (2) the specification “directly or implicitly requires such a narrow construction.” See *Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1363, 1369–70 (Fed. Cir. 2003). Defendants have pointed out neither. There is no reason (in the claims or specification) that the inputting logic step could not be performed before the programming step or the receiving one or more instruct signals step. Similarly, there is no reason that the receiving a plurality of

discrete signals step could not be performed before the inputting logic step. Defendants' specific ordering requirements are rejected.

The Court finds that the steps of 6'649 Patent claim 9 need not be performed in the recited order.

21. dedicated register memory ('2,649 Patent claims 78, 82, 83, and 97)

PMC	Vizio
A memory space location preconfigured to temporarily store information for use in later operations.	A register memory used strictly for one function, and not used for any other functions.

The parties dispute whether PMC includes the concept of “dedicated.”

Positions of the Parties

PMC contends that it has taken the Phase 1 “register memory” construction and modified it to add the concept that the memory is “preconfigured” to store information. (Dkt. No. 69 at 34.) PMC contends that the concept of “dedicated” means that the register has been designated for use as a register memory (at least until reconfiguration.). PMC objects to Vizio’s construction as suggesting that a register memory can only have one function, thus requiring each specific operation to have its own register memory. PMC contends that although Vizio points to a passage that indicates that certain operation might have certain functions ('217 Patent 82:55-83:37), PMC contends this does not define “dedicated register memory” to require this feature. PMC states this passage only indicates that certain named register memories, not every register, are “dedicated strictly to the functions described below and are not used for any other functions.”

PMC contends that the specification passage cited by Vizio only mentions that specific register memories in one embodiment are “dedicated” to certain specific functions, but it never defines the term “dedicated register memories.” At the oral hearing, PMC argued that “dedicated register

memory” merely refers to a register memory that is always a register memory, as opposed to a memory that may temporarily operate as a register memory. (Dkt. No. 237 at 96-97.)

Vizio contends that under PMC’s construction, every memory location that can temporarily store information would be “dedicated.” Vizio contends that PMC’s construction effectively reads out the word “dedicated.” Vizio contends that the specification describes two classes of register memories: working memories and dedicated memories. Vizio contends that working memories can be used for multiple functions, but “dedicated register memories” are “dedicated strictly to the functions described below, and are not used for any other functions.” ’217 Patent 83:24-26. Vizio contends that this passage is the only disclosure regarding dedicated register memories, and PMC should be held to that disclosure. (Dkt. No. 196 at 23-24.)

Analysis

PMC’s construction, in effect, does not give meaning to “dedicated” as PMC’s construction could be interpreted to encompass all register memories as the term “register memory” is construed in the Phase 1 Order based on what breadth of meaning “preconfigured” carries. Further, PMC has not pointed to any evidence that links “dedicated” to “preconfigured.” Vizio, however, reads more into the specification than is actually recited. The specification citation provided by Vizio states: “[w]ith the exception of the memories whose names include the word ‘working,’ all the aforementioned register memories are dedicated strictly to the functions described below and are not used for any other functions.” ’217 Patent 83:24-26. This passage does not mandate that the “aforementioned register memories” may only have strictly one function. In fact, the register memories may have the “functions” (plural) as “described below.” These register memories are not stated to be limited to one function. The specification does not provide a clear disavowal that the “dedicated” register memories must only provide one

function. In this context, “dedicated” as used in the term is more appropriately viewed as describing the register memory, not the function provided by the register memory.

The Court construes “dedicated register memory” to mean “memory that is dedicated for use solely as a register memory.”

22. [from/cause] said plurality of programmable processors ('885 Patent claims 102, 105, and 106)

PMC	Vizio
This term does not require construction beyond its plain and ordinary meaning.	From/cause each programmable processor of said plurality of programmable processors.

The parties dispute whether the file history mandates the use of “each.”

Positions of the Parties

PMC contends the dispute is the same as the dispute for the term “among said plurality of programmable processors,” whether the claim requires the invocation of all of the programmable processors. PMC contends that the prosecution history Vizio cites to relates to canceled application claim 123 which included the word “each.” (Dkt. No. 69 at 35-36.)

Vizio notes that the asserted issued claims (102, 105 and 106) correspond to application claims 160, 163 and 164. Vizio contends that during prosecution, PMC stated that the prior art fails to teach “outputting processing information at each of said plurality of programmable processors, as claimed in claims 123-128 and 158-170. For this reason, the reference also fails to teach . . . the step of causing, using a programmable control processor, at least one of said plurality of programmable processors to receive only of said data message to process said data message selectively, as claimed in Claims 128 and 163.” (Dkt. 196 Ex. M (July 8, 2013 Amendment) at 55.)

The parties did not argue this term at the oral hearing.

Analysis

Similar to the “among” term discussed above, the prosecution history provides guidance. Though application claim 123 does not correspond to the asserted claims, application claims 160, 163 and 164 are corresponding claims and subject to the statements made by the applicants. (Dkt. 196 Ex. M (July 8, 2013 Amendment) at 55.) For similar reasons as provided with the “among” term, the Court finds that the proper construction includes “each.”

The Court construes “[from/cause] said plurality of programmable processors” to mean “from/cause each programmable processor of said plurality of programmable processors.”

23. receives a subset of a plurality of signals ('217 Patent claim 38)

PMC	Vizio
This term does not require construction beyond its plain and ordinary meaning. To the extent a construction is necessary, PMC proposes: Receives a portion of a larger set of signals.	Receives less than the full set of the plurality of signals.

The dispute presented is really a dispute as to the meaning of “subset” as discussed above for the term “subset of [a/said] plurality of signals.” PMC contends that the term does not need construction, because the addition of “receives a” to the “subset of [a/said] plurality of signals” does not raise any additional issues for construction. Vizio provided no additional briefing. The parties did not argue this term at the oral hearing.

Analysis

Having construed “subset of [a/said] plurality of signals,” the addition of “receives a” does not raise any additional construction disputes.

The Court finds that other than the construction of “subset of [a/said] plurality of signals” as construed above, the term “receives a subset of a plurality of signals” needs no further construction.

24. multimedia presentation ('217 Patent claims 1, 30, 31, 32, and 38)

PMC	Vizio
This term does not require construction beyond its plain and ordinary meaning. To the extent a construction is necessary, PMC proposes: A presentation that uses multiple forms of media.	Presentation comprising the combination of two or more media (i.e., channels of communication, such as radio, television, broadcast print, or Internet).

The primary dispute is a dispute as to the meaning of “media,” which is a term construed above. The parties also dispute whether Vizio’s construction would exclude disclosed embodiments by requiring the presentation to be “combined,” thus excluding a coordinated presentation of two media on two separate displays.

Positions of the Parties

PMC notes that Vizio’s use of “combined” would require the presentation to be output to a single display. PMC contends that claims, such as ’217 Patent claim 14 require outputting the television program of a multimedia presentation on a first output device and a second medium of the presentation on a second output device. (Dkt. No. 69 at 38.) PMC also contends that Vizio’s construction would exclude the Wall Street Week example (a graphic of a user’s portfolio overlaid on the television program) because such a presentation is presented only through a TV monitor, not through multiple channels of construction. (*Id.*) Vizio does not separately argue this term beyond the arguments of the “media” term.

The parties did not argue this term at the oral hearing.

Analysis

The primary disputes between the parties are addressed above with regard to “media.” As to the impact of “multi,” the Court adopts PMC’s construction.

The Court construes “multimedia presentation” to mean “a presentation that uses multiple forms of media.”

25. Content Terms

content [of a/said [first/second] medium ('217 Patent claims 1, 4, 30, 31, and 38)

determining[s] content / identify[ies/ing] [said] content ('217 Patent claims 1, 30, and 38)

PMC	Vizio
These terms do not require construction beyond their plain and ordinary meaning.	<p>Content [of a/said [first/second] medium: Information in or describing the medium, such as the identity of the program, and words, sounds, and images in the medium, that say something about the substance of the medium.</p> <p>determining[s] content / identify[ies/ing] [said] content: Requires some ascertaining or recognizing the content, e.g. an identifier that is associated with a particular television program, and not simply determining / identifying the presence of a type of information.</p> <p>NOTE: Vizio added the “e.g.” phrase post briefing. (Dkt. No. 212 at 6.)</p>

The parties dispute whether merely determining the type of information (for example audio verse video) constitutes determining content.

Positions of the Parties

PMC contends that Vizio attempts to take disparate portions of the BPAI's discussion of "content of a medium" and combine them into a single claim definition, while removing context. PMC states that the BPAI noted that a "definition of 'content' as 'substance, gist, meaning, or significance' is supported by a dictionary definition" and that "[c]ontent of a medium is information in or describing the medium, such as the identity of the program, and words, sounds, and images in the medium." (Dkt. No. 69 Ex. 8 (Jan. 13 2009 BPAI Decision) at 26.) PMC contends that in a completely separate discussion over 60 pages later in its decision, the BPAI distinguished the claims over prior art that disclosed identifying the "sync signal 'content,'" noting that "[a] sync signal may be content of a signal, but it is not 'content' of a 'medium' because it says nothing about the substance of the media (the program) being received." *Id.* at 87.

PMC contends that Vizio combines these completely separate discussions of "medium," requiring that the "identity of the program, and words, sounds, and images in the medium" must also "say something about the substance of the medium." PMC contends that is not what the BPAI said. PMC contends that to the extent any construction of this term is necessary, the BPAI confirms that it merely means "the substance" of the medium. PMC contends that it would not aid the jury to inform the jury that "the content" of the medium is synonymous with "the substance" of the medium.

As to "determining / identifying" the content, PMC contends that Vizio selectively edits the BPAI's decision. PMC notes that the BPAI stated:

The limitations of "determining content" or "identifying content" require some ascertaining or recognizing the content, but this is not limited to machine recognition. As disclosed, this could be an identifier that is associated with a particular television program, such as 'Wall Street Week.' The identifier is just a number that has an association with the program and does not have to be human readable text.

(*Id.* at 26.) PMC contends that Vizio takes the first part of this passage—“[r]equires some ascertaining or recognizing the content”—and then omits the entire following discussion which makes clear that identifying or determining content may simply include recognizing a numerical identifier having some association with the content. PMC states that Vizio then adds a requirement that “determining” or “identifying” the content of a medium cannot be “simply identifying the presence of a type of information.” PMC contends that Vizio’s interpretation would exclude the very embodiment relied upon by the BPAI, in which a numerical identifier reflects the “presence of a type of information,” such as a particular television program.

Vizio contends that PMC disregards the prosecution history. Specifically, Vizio contends that PMC repeatedly stated that the “content of a medium” is what the actual television program is, and not just a description of what the signal is. Vizio contends that there are three examples: (1) PMC described content as “program specific information” (Dkt. No. 196 Ex. S (Feb. 4, 2002 Amendment) at 35), (2) described an embodiment in which “the content of television programming is determined” such that “a determination of what television program is received [which] is not contemplated by the prior art” (*id.* at 119-120), and (3) disparaged the prior art because it does “not signify what television program is being provided via the television broadcast” (Dkt. No. 196 Ex. F (Mar. 7, 2005 Appeal Brief) at 32-33.). Vizio contends that it proposes the same construction for “content of a medium” used by the Examiner in the Notice of Allowance to capture PMC’s statements: “information in or describing the medium, such as the identity of the program, and words, sounds, and images, in the medium []. Says something about the substance of the media.” (Dkt. No. 196 Ex. B (Feb. 25, 2010 Notice of Allowance) at 3.)

Vizio also states that on appeal, PMC argued that determining the content of a medium requires determining the identity of a television program (e.g., Wall Street Week). (Dkt. No. 196

Ex. F (Mar. 7, 2005 Appeal Brief) at 34.) Vizio contends that the Appeals Board and the Examiner agreed and construed both “determining” and “identifying” content as “require some ascertaining or recognizing the content, but this is not limited to machine recognition. As disclosed, this could be an identifier that is associated with a particular television program, such as ‘Wall Street Week.’” (Dkt. No. 196 Ex. N (Jan. 13, 2009 Decision on Appeal) at 26); (Dkt. No. 196 Ex. B (Feb. 25, 2010 Notice of Allowance at 3).) In response to PMC’s argument that Vizio’s proposed construction would “exclude the very embodiment relied upon by the BPAI,” Vizio states that the “numerical identifier” does not merely identify the presence of a type of information. Rather, Vizio notes that the BPAI stated, the numerical identifier would be unique to the “Wall Street Week” television program, which is consistent with Vizio’s construction. (Dkt. No. 196 Ex. N at 26.)

Vizio contends that the negative limitation in Vizio’s construction for determining/identifying content (“and not simply determining the presence of a type of information”) is necessary because it prevents PMC from reclaiming scope that it disavowed during prosecution, specifically that determining whether a signal includes audio or video satisfies the claims. Vizio states that the Examiner initially asserted that identifying a “sub-pilot tone” that indicated audio was present anticipated “determining the content” of a television program. (Dkt. No. 196 Ex. S (Feb. 4, 2002 Amendment) at 128-129.) Vizio contends that to traverse this rejection, PMC argued that merely detecting the “sub-pilot tone identifies the presence, not the content, of the sub-audio.” (*Id.* at 138.) Vizio contends that PMC should not be allowed to reclaim the scope it surrendered.

In reply, PMC summarizes the dispute as to what “content” is being determined or identified in the claims: whether it could simply be a numerical identifier associated with a TV

program, or whether it must be something more: such as the “words, sounds, and images.” PMC states that the BPAI decision makes clear that “content . . . could be an identifier that is associated with a particular television program, such as ‘Wall Street Week.’” (Dkt. No. 69 Ex. 8 (Jan. 13, 2009 BPAI Decision) at 26.) PMC states that the BPAI further specifies that the “identifier” is “just a number that has an association with the program and does not have to be human readable text.” (*Id.*) PMC contends that Vizio’s construction, which requires the detection of more than “the presence of a type of information,” is thus directly at odds with the BPAI’s minimum requirement of a numerical identifier that need not be human-readable.

PMC contends that its description of content as “program specific information” does not run afoul of a construction of “content” to require “a number that has an association with [a] program.” (Dkt. No. 196 Ex. S (Feb. 4, 2002 Amendment) at 36.) PMC states that the numerical identifier discussed by the BPAI may constitute “program specific information.” PMC states that its description of its invention as requiring “a determination of what television program is received” and whether “particular graphic information is overlaid on the television video” also does not mean that the “determining” or “identifying” step must include the detection of more than the presence of a type of information, such as digital video signals. PMC also asserts that the supposed “disparage[ment] [of] the prior art” does “not signify what television program is being provided” is again not at odds with a construction of “content” to require that a number associated with the identity of a TV program be determined or identified. PMC contends that Vizio’s construction of “content” should be rejected in favor of either no construction, or one that comports with the BPAI’s statements which requires only a bare-bone numerical identifier associated with a television program.

PMC states that if the Court wishes to construe “content of a medium,” it should adopt the plain and ordinary meaning of “something about a medium.” PMC states that Vizio’s attempt to place a negative limitation on “content” (i.e., it must say something about the presence of the medium) is also based on a mistaken reading of PMC’s statements in the file history. PMC contends that during prosecution, PMC stated that the Hirashima “second language subaudio/teletext translation system” does not teach or suggest “identifying the content of a first medium and identifying the content of a second medium” because detecting the presence of the subpilot tone in Hirashima is not the same as detecting the content of the media. (Dkt. No. 196 Ex. S (Feb. 4, 2002 Amendment) at 138 (“Detecting Hirashima’s sub-pilot tone identifies the presence, not the content, of the sub-audio.”).) PMC contends if “identifying the content” means, according to the BPAI, the determination of a numerical identifier associated with a program, such as “Wall Street Week,” then there has been no surrender of claim scope for PMC to state that the identification of a tone or sub-audio is not the same as the identification of a certain program identifier, such as the name of the translation or audio recording under Hirashima. (Dkt. No. 83 at 17.)

At the oral hearing, it became clear that PMC contends that merely determining/identifying the “type” of content is encompassed by the claim terms. (Dkt. 237 at 34-35, 37-38, 41-42, 47-48.) Thus, under PMC’s view the content could merely be categorized as broadly as video or audio, and thus, “determining content” / “identifying content” could be as simple as determining whether video or audio is present. PMC contends that there may be other properties or characteristics to determine content but that the first question is what type of content is present, and thus, merely determining the type of content (video or audio) is “determining content” / “identifying content.” (*Id.* at 35, 37-38.)

Defendants emphasized at the oral hearing that the claim terms relate to identifying the content, not merely identifying the type of transmission. Defendants noted that the claims originally contained limitations as to the “kind” of transmission. Defendants noted that “kind” was removed from the claims and the “determining the content” was added. Defendants then noted that the corresponding applicant argument distinguished prior art which merely identified the presence of sub-audio as opposed to determining the content. (*Id.* at 50-51.)

Analysis

The Court rejects PMC arguments as not conforming to the plain and ordinary meaning of the terms, conflicting with the specification and conflicting with the file history. Further, PMC’s arguments are inconsistent. As even PMC acknowledges, the plain and ordinary meaning of “content” relates to the “substance” what is transmitted. (Dkt. No. 69 at 41.) At the oral hearing PMC also reiterated that the “content” is the “substance or gist.” (Dkt. No. 237 at 47.) This conforms to the identifiers of the content in the specification. ’490 Patent 15:57-60 (identifiers for each programming unit), 19:21-23 (identifier that identifies “Wall Street Week”); ’217 Patent 26:8-9 (identifier codes for each program). This also conforms to what PMC asserted in prosecution amendments. (Dkt. No. 196 Ex. S at 35 (“identifying content in the description of analyzing identifier signals to identify program specific information”), 119-120 (as to “determines content,” the prior art does not suggest “determining the content of the television video” and “the determination of what television program is received is not contemplated by the applied art.”), 138 (detecting the presence of sub-audio is “not the content” detection).) This also conforms to PMC’s appeal arguments. (Dkt. No. 196 Ex. F at 32-33 (“Accordingly ‘content’ is properly construed to mean ‘substance,’ ‘gist,’ ‘meaning’ or ‘significance,’ in contrast to ‘form’ or ‘structure.’”)), 33 (“the Examiner has interpreted the term ‘determining content’ to simply

mean ‘detecting a portion of a transmission signal.’ As properly construed, the synchronization signals of a television video signal are not ‘content’ of a medium.”), 34 (“The content (the ‘Wall Street Week’ program) of the television broadcast (second medium) is identified.”)) This also conforms to the BPAI’s appeal decision. (Dkt. No. 196 Ex. N at 26 (“Although not defined in the specification, Appellants’ definition of ‘content’ as ‘substance, gist, meaning, or significance’ is supported by a dictionary definition (Br. 32). ‘Content’ of a medium is information in or describing the medium, such as the identity of the program, and words, sounds, and images in the medium. The limitations of ‘determining content’ or ‘identifying content’ require some ascertaining or recognizing the content, but this is not limited to machine recognition. As disclosed, this could be an identifier that is associated with a particular television program, such as ‘Wall Street Week.’”))

Thus, the intrinsic record clearly conforms to the plain and ordinary meaning which conveys the concept of the substance or gist of what is being transmitted. Further, this evidence clearly counsels that determining / identifying the content is not merely identifying the type of the medium.

PMC ignores this meaning and bases its arguments, though, on the contention that “content” transmitted on a medium is “something about a medium” such as merely identifying the presence of video or audio. (Dkt. No. 83 at 17; Dkt. 237 at 34-35, 37-38, 47-48.) To reach this conclusion, PMC ignores the plain meaning described above. Further, PMC ignores the clear context of the claims in which the “content” of a medium and “medium” are separate elements. Thus, PMC argues that identifying merely “TV” or “audio” would identify the content. PMC, though, is identifying the medium, not the content, which are different claim elements. For example, ’217 Patent claim 1 recites (1) a first medium and a second medium and (2)

determining content of each medium. The content is then identified with an identifier and the identifier is used in coordinating the multimedia presentation including the requirement that “said content of said medium comprising an identifier that matches said predetermined identifier explains a significance of said presentation using said information.” Under PMC’s theory, merely identifying the type of medium would be sufficient to identify the content. However, such identification does not identify the “substance” of what is transmitted. PMC’s position also directly conflicts with its prosecution arguments in which PMC argued that the claims did not merely relate to identifying the type of transmission, such as merely identifying the presence of sub-audio. In fact, PMC appears to construe the terms to mean that which was explicitly removed from the claim, the “kind” of transmission.

Further, PMC acknowledged, at the oral hearing, that its construction does not require identifying the content but rather merely “the first question” that is part of identifying the content. (Dkt. No. 237 at 35, 37-38, 47-48 (identifying “TV” or “audio” is sufficient).) However, the claim limitation does not merely state determining or identifying part of the content or performing a partial identification of the content, rather the terms in question are “determining content” and “identify[ies/ing] content.” Merely identifying the type of content does not identify the content.

Finally, it is noted that PMC also bases its arguments on the premise that Vizio would exclude the example of there being a numerical identifier associated with a TV program. Vizio does not make such a statement, and Vizio’s construction explicitly contradicts PMC’s assertion. In particular, Vizio’s construction would encompass “information,” which is “the identity of the program.” Such information could clearly be the numerical identifier of a TV program. PMC has not presented any evidence that indicates Vizio’s construction conflicts with the intrinsic

record. Moreover, Vizio's construction is in accordance with the plain meaning and the repeated statements of the applicants and the BPAI.

The Court finds that “content [of a/said [first/second] medium” has its plain and ordinary meaning and that “determining[s] content / identify[ies/ing] [said] content” means “ascertaining or recognizing the content, and not simply determining / identifying the type of medium.”

26. a [first/second] passing fashion ('885 Patent claim 102 and 106)

PMC	Vizio
This term does not require construction beyond its plain and ordinary meaning.	Indefinite

Vizio contends that the type or manner of passing is not disclosed.

Positions of the Parties

PMC states that the claim recites, “passing a first portion of said stream of digital data among said plurality of programmable processors in a first passing fashion” and “controlling, with said programmable control processor, the passing of a second portion of said stream of digital data among said plurality of programmable processors in a second passing fashion.” PMC contends that one of ordinary skill in the art, reviewing the claims and the specification, would understand (1) that there are different fashions, or manners, of passing streams of digital data and (2) what a first passing fashion and a second passing fashion, as recited in the claims, mean. (Dkt. No. 69 at 41.)

Vizio notes that PMC readily admits there are “different fashions, or manners of passing streams of digital data,” but Vizio contends that nothing in the specification or prosecution history provides any guidance to one of ordinary skill in the art as to what these “fashions or

manners” are. Vizio contends that even with the guidance of the intrinsic record, a person skilled in the art could understand “passing fashion” as passing data or signals uncompressed, compressed, unencrypted, encrypted, with error correction, without error correction, with or without authorization information, passing by value, or passing by reference, etc. (Dkt. No. 196 at 27 (citing Dkt. No. 196-23 (Reader Decl.) at ¶¶ 116, 139).)

Vizio also contends that nothing suggests how the first and second passing fashions differ. Vizio contends that in *Intermec Techs. Corp. v. Palm Inc.* a pair of similar terms, “first style” and “second style,” are indefinite because “[n]owhere in the specification or claims is there any suggestion as to how the styles differ, examples of styles, nor any other guidance which would allow a person of ordinary skill in the art to discern the meaning of ‘first style’ or ‘second style,’ nor to discern the degree of difference between the two.” *Intermec Techs. Corp. v. Palm Inc.*, 738 F. Supp. 2d 522, 546-48 (D. Del. 2010). Vizio contends that the ’885 patent specification, claims, and prosecution history provide no guidance as to how the “first/second passing fashions” differ.

In reply, PMC contends that the specification includes extensive disclosures of “fashion[s]” in which data is passed. PMC points to the specification disclosures that “[w]hen said transfer-00-header-message instructions are executed in the course of the processing of the message of FIG. 2H, said instructions cause processing to proceed in the following fashion,” followed by more than a column of disclosures regarding how the message is processed and transferred. ’217 Patent 59:1- 60:16. PMC also points to the passage: “In this fashion, said transfer-a-00-header-message instructions cause controller, 39, to transfer the message of FIG. 2H to the addressed apparatus of said message.” *Id.* at 60:14-16. PMC contends that the claims

make clear that the data must be passed in a “first” and “second” passing fashion, i.e., different fashions of passing data.

The parties did not argue this term at the oral hearing.

Analysis

The claim limitation only requires passing a first portion of the data among the processes in a first fashion and passing a second portion in a second fashion. Vizio seeks to limit the claims to a particular type of passing. However, that is not what is claimed. The specification provides numerous details regarding ways portions could be passed. ’217 Patent 59:1- 60:16. This portion of the description begins by stating that “instructions cause processing to proceed in the following fashion.” Seven paragraphs then explain the fashion of transferring a message of Figure 2H such that “[i]n this fashion,” the message instructions cause the controller “to transfer the message of FIG. 2H to the addressed apparatus.” *Id.* at 60:14-16, 59:5-60:7. The specification continues with “[b]y contrast...” and then describes the transfer of a message that contains command information such as shown in Figure 2K. *Id.* at 60:17-61:36. These passages of the description are summarized as describing “[i]n this fashion...instructions cause controller, 39, to transfer the message of FIG. 2K to the addressed apparatus of said message.” In this context, it is reasonably certain that there can be multiple ways of passing portions of the data among the processors. Vizio, in effect, contends that the first fashion and second fashion must be limited to particular fashions. However, even Vizio’s expert acknowledges that one skilled in the art would understand that there may be many different ways passing could be performed as a broad range of possibilities exists. (Dkt. No. 196-23 (Reader Decl.) at ¶¶ 116, 139.) Merely because a term is broad does not render it indefinite. Here, it is reasonably certain that, as claimed, there merely must be a first fashion and a second fashion. Further, the intrinsic evidence provides meaning to

the passing fashions and the extrinsic evidence establishes that the concept of differing fashions of passing would have meaning to one skilled in the art to a reasonable certainty.

The Court finds that “a [first/second] passing fashion” has its plain and ordinary meaning.

27. expanding [and contracting] the portion of said [received] information transmission ('775 Patent claims 3 and 13)

PMC	Vizio
Selecting a longer [or a shorter] portion of said [received] information transmission.	Indefinite

The parties do not raise issues beyond those raised in the term “an expanded [and contracted] code portion” which is construed above. The same analysis applies here.

The Court construes “expanding [and contracting] the portion of said [received] information transmission” to mean “selecting a larger [or a smaller] portion of said [received] information transmission.”

28. control processor ('2,649 Patent claims 1, 2, 3, 8, 11, 13, 39, 41, 42, 62, 67, 78, 91, 92, 93, and 97; '650 Patent claim 1)

PMC	Samsung
A digital electronic device or circuit that controls other devices or circuits by operating on control information according to instructions.	A processor that controls other devices or circuitry by processing control information.

As noted in the Agreed Constructions above, the parties agreed that “processor” means “a device that performs operations according to instructions.” Samsung contends that PMC’s change of “processor” to “digital electronic device or circuit” is noteworthy because “digital

“electronic device” does not appear in the patent specification. The parties did not argue this term at the oral hearing.

The term in question includes “processor.” PMC has not shown why the agreed construction of “processor” should be deviated from. Having construed “processor,” Samsung’s construction most accurately conforms to the specification. Specifically, the specification describes control processors responding to “signals” generally. ’217 Patent Abstract. Further, SPAM signals “are invoked at the control processor” (’217 Patent 81:32-36) and “SPAM signals includes data, computer program instructions, and commands” (’217 Patent 22:4-5).

The Court construes “control processor” to mean “a processor that controls other devices or circuitry by processing control information.”

29. message / message stream (’2,649 Patent claims 1, 2, 7, 8, 11, 28 29, 39, 41, 48, 49, 50, 51, 64, 78, 82, 83, 84, 88, 90, 92, 93, 94, 97; ’650 Patent claim 1)

PMC	Samsung
(message) A digital data package having a recognizable structure.	(message) All the signal processing information, transmitted in a given transmission, from the first bit of one header to the last bit transmitted before the first bit of the next header.
(message stream) A series of messages.	(message stream) A series of ordered transmitted messages.

Positions of the Parties

Samsung’s construction of “message” conforms to the Court’s Phase 1 preliminary construction. PMC acknowledges that the Court’s Phase 1 preliminary construction of “message” is acceptable and also has no objections to construing “message stream” to be “a series of messages.” (Dkt. No. 69 at 50.) Samsung contends that PMC does not cite support to limit the term to “digital data package” or “recognizable structure.” (Dkt. No. 78 at 28.)

As to “message stream,” Samsung contends that the specification shows message streams in a particular order. (Dkt. No. 78 at 28 (citing Figure 2I).) Samsung further contends that the specification teaches that messages are transmitted.

The parties did not argue this term at the oral hearing.

Analysis

The parties are substantively in agreement as to “message” as PMC and Samsung have both indicated that the Phase 1 preliminary construction is acceptable. As to “message stream,” Samsung has not identified any portions of the intrinsic record that mandate inclusion of the limitations Samsung seeks beyond the plain meaning of message stream.

The Court construes “message” to mean “all the signal processing information, transmitted in a given transmission, from the first bit of one header to the last bit transmitted before the first bit of the next header.”

The Court construes “message stream” to mean “a series of messages.”

30. cadence information ('2,649 Patent claim 67)

PMC	Samsung
Fields in a data package such as headers, length tokens and/or end-of-file signals that enable a receiver apparatus to distinguish the individual messages within a message stream.	Information (such as headers, length tokens, or end-of-file signals) that enables a receiver apparatus to distinguish the individual messages of a message stream.

The parties dispute whether the term should include “fields in a data package” verse “information.”

Positions of the Parties

PMC objects to construing the term as “information” rather than “fields in a data package.” PMC contends that it seeks to define the structure of the term rather than exemplary

content. PMC contends that using “information” adds nothing for the jury. (Dkt. No. 69 at 52-53.) PMC contends that the specification refers to “cadence signals” and that, in context, “signals” are transmitted as “data packages.” (Dkt. No. 69 at 53.)

Samsung contends that “data package” is nowhere in the specification and that PMC does not cite to support for referencing “fields.” (Dkt. No. 78 at 29.)

The parties did not argue this term at the oral hearing.

Analysis

The disputes presented are similar to those presented in Phase 1 for the same term. For the reasons articulated in Phase 1 Order, the Court rejects PMC’s construction.

The Court construes “cadence information” to mean “information (such as headers, length tokens, or end-of-file signals) that enables a receiver apparatus to distinguish the individual messages of a message stream.”

31. digital television signals ('2,649 Patent claims 39, 51, and 67)

PMC	Samsung
Television programming that includes digital audio and digital video signals.	Television programming in which the video and audio are transmitted as digital video signals and digital audio signals, at least a portion designed for multiple recipients.

Positions of the Parties

PMC states that the specification makes clear that the Court’s Phase 1 preliminary construction is correct. (Dkt. No. 69 at 53.) PMC contends that its construction is “consistent” with the Phase 1 preliminary construction. (*Id.*) Samsung adopts the Court’s Phase 1 preliminary construction. Samsung contends that PMC’s construction broadens the construction through the

use of “includes.” Samsung contends that PMC offers no rationale for removing “at least a portion designed for multiple recipients.”

The parties did not argue this term at the oral hearing.

Analysis

The Court adopts the same construction as originally presented in the Court’s Phase 1 preliminary construction for the reasons described in the Phase 1 Order.

The Court construes “digital television signals” to mean “television programming in which the video and audio are transmitted as digital video signals and digital audio signals, at least a portion designed for multiple recipients.”

32. control signal ('775 Patent claims 2, 3, 11, 12, 13, 14; '885 Patent claim 106)

PMC	Samsung
This term does not require construction beyond its plain and ordinary meaning. To the extent construction is necessary, PMC proposes: A signal that carries information, data or instructions that affects, controls, or enables processing.	A signal that controls as opposed to only providing identification information.

Samsung contends that PMC’s inclusion of “information” “that affects” “processing” expands the construction beyond “control.”

Positions of the Parties

Samsung contends that, like the term “valve control signal,” there is a fundamental dispute between Samsung and PMC about the plain meaning of the term “control signal” that should be resolved. Samsung states that while this Court and others have declined to construe this term in the past, the applicants’ disclaimer in the ’775 patent file history (which was not addressed by the parties in previous cases) makes an explicit construction necessary in this case.

Samsung contends that the dispute is whether a control signal must actually exert control or merely provide “information” that “affects” and “enables” processing. Samsung contends that the applicants disclaimed the latter to avoid prior art during prosecution.

Specifically, Samsung states that the applicants distinguished the claimed “control signal” from a “pointer” (the page number in the Seth-Smith reference) because the “decoder . . . is not controlled by this pointer” and the pointer merely “tells the decoder where to locate teletext information.” (Dkt. No. 78 Ex. K, (02/28/2013 Amendment) at 24-25.) Samsung also references the statement that the pointer “is more appropriately understood as an input to the decoder, rather than as a signal that controls the decoder.” (*Id.*) Samsung also contends that the applicants distinguished the claimed “control signal” from “subscription control information,” because subscription control information is merely “used to identify subscriber messages at the receiver’s decoder.” (*Id.* at 73.) Samsung states that while “pointers” and “subscription control information” may affect or enable processing, they do not exert control as was pointed out during prosecution.

In reply, PMC notes that this Court has twice (*Echostar* and *Zynga*) declined to construe the term. (Dkt. No. 83 at 19.) PMC contends that claim scope was not surrendered during prosecution by distinguishing Seth-Smith’s “encoded page number” from a “control signal.” (Dkt. No. 78 Ex. K (Feb. 28, 2013 Amendment) at 25-26.) PMC states that, rather, the applicant argued that the “encoded page number does not amount to a control signal because the encoded page number does not control a decoder to decode, transfer, expand, and contract the code portion of an information transmission.” (*Id.* at 26.) PMC contends that such a statement is not a clear disavowal of a “control signal,” which has the ability to “affect, control, or enable

processing.” (Dkt. No. 83 at 19 (citing ’217 Patent 7:49-63, 12:6-14, 39:6-10, 115:41-60, 149:47-67, 169:3-15; ’490 Patent, 17:39-46, 12:13-32, 19:35- 20:7, 4:5-30, FIGs. 4A-4E).)

The parties did not argue this term at the oral hearing.

Analysis

The claim term in question is “control signal.” For the reasons explained above for the term “valve control signal,” the Court similarly rejects PMC’s expansion of “control” here to further include “affect” and “enable.” PMC has not identified any intrinsic evidence that supports changing the term “control” to include concepts beyond control, such as “affect” and “enable.” As to Samsung’s negative limitation, PMC has acknowledged that a mere identification (such as a page number) is not within the ordinary meaning of “control.” (Dkt. No. 83 at 19-21.) As the issue is not in dispute, Samsung has not demonstrated why it would be beneficial for the jury to include the negative limitation.

The Court construes “control signal” to mean “a signal that controls.”

33. information from said first medium / information based on said second medium ('217 Patent claims 1, 30, and 38)

PMC	Samsung
This term does not require construction beyond its plain and ordinary meaning.	Information distinct from video and audio data of the other medium.

The parties dispute whether the information must be distinct from the video and audio of the medium.

Positions of the Parties

Samsung contends its construction aids the jury in its determination by clarifying that the asserted claims involve audio and video data as well as distinct information, which together are used to generate a multimedia presentation (according to the claim preambles). Samsung

contends that the Wall Street Week example disclosed in the patent plainly demonstrates that the claimed “information” is distinct from the claimed “content.” Samsung contends, for instance, that the ’217 Patent teaches combining graphics information, using video overlays, with the video from the broadcast transmission. (Dkt. No. 78 at 30 (citing ’490 Patent at 19:42-20:2).) Samsung contends that in this example, the graphics information is plainly distinct from the video information.

In reply, PMC contends that Samsung neither provides support for its proposal that “information” and “content” are distinct with respect to a “medium,” nor for its assertion that “video and audio data” may be equated with the “content,” but not the information of a medium. PMC contends that neither claim 1 nor the specification discloses that the “content” of a medium consists only of “video and audio data.” PMC further states that the specification and claim language does not require that “information” from or based on a medium must be distinct from the video and audio data. (Dkt. No. 83 at 20.) PMC states that Samsung’s citing of a teaching in the specification of combining graphics information using video overlays does not bolster Samsung’s position because it accounts only for the “video” portion of the proposed “video and audio data” construction. PMC contends that because “information,” “content,” and “medium” are non-technical terms that are already being construed separately, PMC submits that the Court need not construe the terms here.

The parties did not argue this term at the oral hearing.

Analysis

Samsung merely points to an example from the specification in which the relevant information is distinct from the TV video and audio signal. More particularly, Samsung points to the Wall Street Week example where graphics (non-audio / non-video information) are combined

with the audio/video of a television program. Samsung has not, however, identified evidence in the specification mandating such a limitation. *See Arlington*, 632 F.3d at 1254. Further, “[t]he stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming...” (’217 Patent 167:52-55) and “[t]he programming so displayed (or outputted) may be any form of electronically transmitted programming including television, radio, print, data, and combined medium programming and may be received via any electronic transmission means...” (’217 Patent 201:44-47). Moreover, the specification provides further guidance contradicting Samsung’s construction. The ’490 specification describes an embodiment of combining television and radio, a combination that Samsung would exclude. ’490 Patent 18:9-29. A construction excluding embodiments is rarely correct. *See Accent Packaging, Inc. v. Leggett & Platt, Inc.*, 707 F.3d 1318, 1326 (Fed. Cir. 2013) (holding that a construction that excludes the preferred embodiment “is rarely, if ever, correct”). Having rejected Samsung’s “distinct” limitation, the Court has resolved the claim construction dispute. *See O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008) (“district courts are not (and should not be) required to construe every limitation present in a patent’s asserted claims.”); *Finjan, Inc. v. Secure Computing Corp.*, 626 F.3d 1197, 1207 (Fed. Cir. 2010) (“Unlike *O2 Micro*, where the court failed to resolve the parties’ quarrel, the district court rejected Defendants’ construction.”).

The Court finds that the terms “information from said first medium” and “information based on said second medium” have their plain and ordinary meanings.

CONCLUSION

The Court adopts the constructions above for the disputed and agreed terms of the Asserted Patents. Furthermore, the parties should ensure that all testimony that relates to the terms addressed in this Order is constrained by the Court's reasoning. However, in the presence of the jury the parties should not expressly or implicitly refer to each other's claim construction positions and should not expressly refer to any portion of this Order that is not an actual construction adopted by the Court. The references to the claim construction process should be limited to informing the jury of the constructions adopted by the Court.

SIGNED this 25th day of October, 2016.



ROY S. PAYNE
UNITED STATES MAGISTRATE JUDGE